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## Section of Dermatology and Industrial Medicine.

President: J. J. Witton Flynn, M.C., B.A., M.B., Ch.M., New South Wales.

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Honorary Secretary: T. C. Anthony, M.B., B.S., Western Australia.

### President's Address.

J. WITTON FLYNN (Sydney) took as the subject of his presidential address "Dermatological Myths and Legends". He said that the beginnings of dermatology were hardly less ancient than the beginnings of medicine, since skin diseases obtruded themselves on man's attention in a way that few others did. One of the earliest records of medicine, and hence of dermatology, was the Ebers papyrus, which dated to the sixteenth century before Christ. Nearly all diseases in ancient times were associated with demoniacal causes; that conception had influenced all medicine. Philosophical speculations about etiology and schools of treatment based on theories that far outran scientific knowledge had been almost equally unfavourable to progress. The humoral theory of pathology of Hippocrates had dominated medicine for more than 2000 years. Thus until comparatively recent times skin diseases

were regarded as manifestations of one or another concept of pathology. Dr. Flynn then referred briefly to the Egyptian, Greek and Roman periods and went on to discuss the story of some of the common diseases of the skin—psoriasis, scabies, ulcers, *acne vulgaris*, herpes, fungous diseases, *alopecia areata* and pigmentary abnormalities. He mentioned the doctrine of signatures and drew attention to some of the strange therapeutic ideas held in ancient times. He pointed out that modern mankind had no reason for complacency on that score; many unjustified therapeutic notions were still popularly believed.

### Dermatitis and Eczema.

ADRIAN JOHNSON (Sydney) read a paper on the investigative aspects of dermatitis and eczema, in which he described the methods adopted at the skin investigation clinic of the Royal Prince Alfred Hospital, Sydney. It

had been found that not more than six patients could be adequately dealt with in one session, and that treatment of the patient was best not carried out at the clinic, but supervised by the medical officer in whose care the patient was admitted to hospital. The patients were mostly suffering from lesions usually referred to as "endogenous eczema", "nummular eczema", "allergic dermatitis" *et cetera*, the cause of which was well known to require elucidation. A second class were those suffering from suspected contact dermatitis, proof being required. A third class were suffering from urticaria. A fourth class "had suffered many things of many physicians" and were "nothing bettered, but rather worse"; they were referred for patch testing. The methods of investigation were: (i) the taking of a history; (ii) patch testing; (iii) scratch testing; (iv) intradermal testing; (v) a further search for septic foci, the aid of all ancillary services and specialists being invoked. Projected methods of investigation were: (a) investigation of the blood levels of hormones and (b) cooption of the services of a psychiatrist. Details were given of the techniques employed at the clinic in the application of the various tests.

J. SUMMONS (Melbourne) said that the later results from the clinic described, which was the first of its kind in Australia, would be awaited with interest. It was not before its time that some attempt should be made to solve those baffling conditions. He agreed that not much in the way of results had been obtained from the use of scratch tests.

J. M. A. O'DONNELL (Perth) wished to emphasize the importance of the retaking of the history at each interview, when vital but forgotten facts were often elicited. He asked whether Dr. Johnson had tried elimination diets.

J. J. WITTON FLYNN (Sydney) said that it appeared to him that use of the trial diet required admission of the patient to hospital. He believed that hormones should not be used in the present state of knowledge.

T. M. GILBERT (Perth) said that the estimation of 17-ketosteroids in the urine was the best way to obtain an index of the blood content of androgens and oestrogens.

R. J. VERCO (Adelaide) said that it was better to give "Antuitrin S" and so to stimulate the ovary naturally.

E. ROSANOVE (Melbourne) said that he had used "Antuitrin S" in the menstrual type of acne without much success. The value of the scratch tests was practically nil, though an occasional good result was seen, as in a girl who lived on a farm and was sensitive to cow-hair, and recovered on removal from that environment.

J. SUMMONS (Melbourne) said that the giving of "Antuitrin S" did not change the relative levels of androgens and oestrogens.

H. MACMILLAN (Perth) said that scratch tests for food allergy were not at all useful. The giving of dieneestrol in cases of menstrual acne to patients with associated dysmenorrhoea had been found useful by him.

A. JOHNSON (Sydney), in reply, said that he was interested in the question of the wisdom of giving oestrogens and androgens. As Dr. Summons had remarked, it was the relative and not the absolute blood levels that seemed to be important. As had also been remarked, it was confusing to find senile pruritus in men relieved in some cases by testosterone and in others by oestrogens. With regard to diet investigations, that method was possible, and in fact it was the only practical way in the present position of hospital beds to investigate out-patients, even though it might take some weeks to achieve results. In reply to Dr. O'Donnell, Dr. Johnson said that he was not using elimination diets, but was attacking the problem from the opposite aspect.

MILES HAVYATT (Sydney) presented a report on a questionnaire submitted to members of the New South Wales Branch of the British Association of Dermatology and Syphilology to ascertain their views on the terminology and aetiology of dermatitis and eczema. The report was intended to be the basis of a discussion at the meeting of the Section of Dermatology and Industrial Medicine at congress, and was read on behalf of the

author by T. C. ANTHONY (Perth). The first question concerned chiropompholyx and dyshidrosis. At the New South Wales meeting, while the majority of those present used the term "chiropompholyx" or "pompholyx", others preferred the term "dyshidrotic eczema" or "chronic vesicular dermatitis". The meeting agreed to differ as to terminology, since it was recognized that the condition did not include cases of contact dermatitis due to external factors which disappeared when the factors were removed. It was agreed that the condition was in many cases of internal origin, but that fungous infection and external irritants must be excluded. Infection with the *Bacillus endoparasiticus* was also mentioned, as were (a) the theory of an "ide" eruption from fungous or bacterial infection elsewhere, and (b) the role of food allergy, metabolic upsets and neurogenic factors. Most members agreed that the lesions were not due to blocking of sweat ducts, although an associated dysfunction of the sweat mechanism was present. With regard to the second question, no member regarded "dermatitis" and "eczema" as synonymous terms. There were three schools of thought: (a) those who regarded inflammation of the skin due to endogenous causes as eczema and that due to exogenous causes as dermatitis; (b) those who regarded dermatitis as the inflammation following primary or physical irritants and eczema as inflammation caused by sensitization of the skin; (c) those who regarded the term eczema as descriptive of an eruption producing at some stage vesiculation, weeping and crusting, and considered that it could complicate any inflammation of the skin. The third question concerned the use of the terms "allergic dermatitis", "contact dermatitis", "chemical dermatitis" and "dermatitis venenata". Most of the New South Wales members thought the terms unnecessary and confusing. Some preferred "contact dermatitis" or "exogenous dermatitis" for conditions caused by the action of external agents on the skin, the causal agent, if known, being prefixed. The term "allergic dermatitis" was rejected because it was thought to confuse the picture for laymen, especially in compensation cases; but it was agreed that the entity existed. It was thought that the term "dermatitis venenata" should be retained for historical reasons, when the causal agent was a plant or plant product. In reply to the fourth question, most members divided neurodermatitis into two types—the localized neurodermite and disseminated neurodermatitis, which was regarded by the majority as being synonymous with Besnier's prurigo. It was agreed that an unstable nervous system played a great part in the production of the lesions, but many diverse contributory causal factors were also mentioned. The fifth question had to do with nummular eczema; most members did not regard it as a distinct entity, but merely as a pattern reaction or as a variety of endogenous eczema. Two different schools were evident among the members: one regarded the condition as the dry scaly patches occurring in winter on the skin of those with ichthyotic tendencies, especially after excessive use of soap and water; the other school restricted the term to the discrete circular lesions with pinpoint vesiculation, weeping and crusting, which they believed to result from bacterial allergy or at least from an internal factor. In reply to the sixth question, which concerned atopic eczema (Coca), all the New South Wales members followed Coca's postulates before making a diagnosis of atopic dermatitis. Although some thought the term superfluous, others thought it useful in indicating prognosis. The point was discussed at some length.

The President said that the discussion would cover each disease as it appeared in the questionnaire. Each member would be asked to state his views.

In regard to the use of the term "chiropompholyx", J. M. A. O'Donnell (Perth) said that he used the term "vesicular dermatitis". He pointed out that the name was a secondary consideration, the determination of the cause being the main desideratum. T. M. Gilbert (Perth) used the term "pompholyx", regarding the condition as a malady of internal origin. E. Habersfeld (Perth) and T. C. Anthony (Perth) agreed with this viewpoint. J. Summons (Melbourne) used the term "pompholyx" if fungous infection and external irritants could be excluded. W. C. T. Upton

(Adelaide), to simplify matters as a picture, used the term "vesicular dermatitis". E. Rosanove (Melbourne) used the term "chirpompolyx" for the vesicular type affecting the lateral edges of the fingers and often of fungous origin. The type due to external irritants was vesicular and affected the palms. The condition was not of endogenous origin. E. Atkinson (Perth) agreed that the condition was of endogenous origin. R. J. Verco (Adelaide) felt that to be a true pompholyx the condition should affect the palms as well as the fingers. He regarded it as of endogenous origin. H. Macmillan (Perth) regarded the condition as endogenous and not due to involvement of sweat glands. J. J. W. Flynn (Sydney) used the term "dyshidrotic eczema" and applied the term "pompholyx" to conditions due to food, bacterial or neurogenic influences. J. M. A. O'Donnell (Perth) said that that type of eruption commonly occurred in Perth during the summer months and was known popularly as February rash. Instancing the effect of food, he recalled the case of a young girl whose rash occurred each year when the figs on the tree in the family garden ripened, till she was old enough to resist temptation. After she had avoided figs for eight years a further ingestion was promptly followed by another attack.

The President asked for opinion on the terms "dermatitis" and "eczema". E. Rosanove (Melbourne) said that he used the term "eczema" when the condition was of internal origin and "dermatitis" for those conditions caused by external irritants. W. C. T. Upton (Adelaide) said that the term "eczema" should not be discarded, as Adamson taught that it was a distinct clinical entity and was characterized by discrete groups of acutely inflamed vesicles and papules. That could complicate dermatitis. As Kinnear pointed out, dermatitis was caused by obnoxious influences attacking the skin from without through the horny and prickle-cell layer, whilst in eczema the site of first damage was in the dermis.

The President asked for views on the third question. J. Summons (Melbourne) said that he considered all the terms redundant, except "chemical dermatitis" for those conditions caused by primary irritants and "contact dermatitis" for those cases in which altered reactivity of the skin—in other words, allergy—was present. W. C. T. Upton (Adelaide) said that in localized contact dermatitis, for example, caused by hair dye, in which the patient subsequently developed patches elsewhere, the term "sensitization dermatitis" was admissible. E. Rosanove (Melbourne) regarded the terms "chemical dermatitis", "allergic dermatitis" and "dermatitis venenata" as redundant. J. M. A. O'Donnell (Perth) preferred to retain the term "dermatitis venenata" to describe the eruption due to plants and their products, pointing out the characteristic oedema of the eyelids in that condition.

The President asked for opinions on neuro-dermatitis. J. M. A. O'Donnell (Perth) said that lichenified patches were thickened by rubbing. He restricted the term to the *lichen simplex* of Vidal. H. Macmillan (Perth) pointed out that the reason why the lesions were rubbed was the presence of nervous instability. E. Rosanove (Melbourne) recognized two types—the localized and the disseminated. He thought that what they called disseminated neuro-dermatitis was referred to in New South Wales as nummular eczema. That type was common in patients under nervous tension, such as business executives. T. M. Gilbert (Perth) said that the term would be better dropped altogether. No relationship to psychological causes had been shown in the disseminated type. The term could be retained for the localized patches. E. Rosanove (Melbourne) did not agree at all. He said that the condition was a distinct entity in patients of a characteristic psychological make-up.

The President asked for opinions on nummular eczema. E. Rosanove (Melbourne) did not use the term. W. C. T. Upton (Adelaide) used the term for the distinct entity characterized by discoid patches of acutely inflamed vesicles which disappeared and recurred. J. Summons (Melbourne) said that the condition was certainly more common in "high-tension" types, and the importance of

septic foci should be realized. He preferred the term "disseminated neuro-dermatitis". A. Johnson (Sydney) suggested a compromise and use of the term "nummular eczema". He thought that the importance of septic foci and bacterial allergy should also be stressed. J. M. A. O'Donnell (Perth) said that he often saw patients with dry patches of eczema which began to weep if the patients began to worry. That illustrated the psychogenic aspect.

The President asked what those present thought of the term "atopic eczema". W. C. T. Upton (Adelaide) said that he followed the views of Coca. With regard to the prognosis in infantile eczema, the vast majority of patients recovered. In a small percentage of cases relapse occurred in later life. A. Johnson (Sydney) said that it was now admitted that the demonstration of "P.K." bodies was not universal in atopic eczema. It was in the cases of infantile eczema with an atopic history that most relapses occurred. R. J. Verco (Adelaide) said that his experience was that the last man who treated the condition of infantile eczema cured it. Affected children did tend to develop eczema later, which cleared up at the age of about ten years; but in later life such subjects showed no greater tendency to develop skin eruptions than the general population.

#### Industrial Dermatitis.

The Section of Dermatology and Industrial Medicine held a symposium on industrial dermatitis.

EDWARD ROSANOVE (Melbourne) first discussed the differentiation of the terms "dermatitis" and "eczema", recommending that, for the sake of uniformity and clarity, "dermatitis" should be used for conditions due to direct contact with an external irritant, and "eczema" for conditions of endogenous origin. The more irritant the substance and the more sensitive the skin, the more likely was it that dermatitis would result. Red-haired and very fair patients, and seborrheic and hyperhidrotic subjects, were specially susceptible to contact dermatitis. It was suggested that that knowledge might be used to prevent industrial dermatitis up to a point, and that a medical examination prior to employment might be of value. A protest was made against the biased attitude adopted by some medical officers acting for insurance companies, who made every effort to turn down a claim. It was considered that the insurance companies would not want biased opinions. The order of hazardous occupations varied in different countries, but Prosser White gave the workers in the following order: household workers, labourers, painters, metal workers, mill hands, oil and grease workers, physicians, dentists and nurses, cloth handlers and weavers, bakers, tanners and leather workers, chemical and dye workers. The relative frequency of the injurious agents was: alkalis, sugar, oil, chemicals, turpentine and substitutes, dyes, dough, paraffin, friction and heat, petrol, chrome, acids, French polish, nickel and accelerators. The differential diagnosis of an occupational dermatitis was at times difficult; often it was due more to cleansing agents used on the hands than to contact irritants. A careful, detailed history was essential. Sulzberger and Finnerund gave three important criteria for proof of the industrial basis of a case of dermatitis: (i) the condition appeared during a period of industrial exposure or after a reasonable incubation period following cessation of exposure (maximum, two or three weeks); (ii) the dermatitis regularly disappeared or was repeatedly relieved within a reasonable period of days, weeks or even months after cessation of exposure; (iii) the dermatitis tended to recur or to be exacerbated when the worker returned to identical conditions of exposure. Other points given by Sulzberger and Finnerund were: (i) the dermatitis appeared first in areas of maximum exposure and was usually confined to them; (ii) the character and localization of the dermatitis corresponded with those in proved cases due to the same industrial hazards; (iii) a patch test with the offending irritant produced a reaction, if made during the active phase or shortly after; (iv) the cutaneous test produced a reaction similar to the rash; (v) other workers similarly occupied had been or were affected; (vi) the dermatitis appeared within a day or two of the patient's starting a new job. Errors in con-



sidering the condition to be non-industrial were of two types: (i) the basing of the diagnosis on the finding of fungi or other microorganisms in scrapings; (ii) the basing of the diagnosis on negative results to patch tests with the suspected irritant. Errors in diagnosing the condition as industrial were also of two types: (i) the basing of the diagnosis on the occurrence of a rash on the skin of a worker in an industry notorious for the occurrence of dermatitis; (ii) the basing of the diagnosis on a positive response to patch tests. With regard to prognosis, Dr. Rosanove said that the removal of the cause was usually followed by complete recovery. However, eczema might develop, as also might sensitivity to the allergen involved, which might persist throughout life. Treatment of industrial dermatitis was by removal of the cause and by routine measures. Dr. Rosanove concluded his paper by stating nine points in the prevention of industrial dermatitis.

J. O'DONNELL (Perth) said that the latent period of sensitization was often quite long. He had recently seen a patient in hospital with a gastric disorder who had a contact dermatitis of the chest, which turned out to be due to rubbing with camphorated oil six weeks before; it had first appeared when the patient's temperature became raised.

W. C. UPTON (Adelaide) was a little disappointed to hear that controversy occurred in Melbourne between dermatologists over questions of workers' compensation. In Adelaide the two specialists conferred and came to agreement, the case never going to court. He had noticed that some patients responded slowly to treatment and did not seem to improve until the question of compensation was decided.

H. MACMILLAN (Perth) raised the question of aggravation. Whilst in some conditions—for example, scabies—the lesions might be more itchy when hot, the condition could not be said to be aggravated by work. The course of the complaint was not altered and a line had to be drawn somewhere.

J. J. WITTON FLYNN (Sydney) said that the question of the patient's not returning to his former employment was complicated by the fact that he was perhaps a skilled tradesman and was unwilling to engage in less remunerative work; miners were good examples of that position. With regard to aggravation, Dr. Flynn agreed with Dr. Johnson that it required the wisdom of Solomon to determine the point at which aggravation ceased to operate. With regard to hardening, some material produced dermatitis only in new workers, who then apparently acquired immunity, so that irritant action became less and ceased altogether. The wool industry was an example. On the question of scrupulous cleanliness, it should be remembered that excessive soap and water would aggravate dermatitis in most cases. Dr. Flynn believed that the increase in industrial dermatitis had run *pari passu* with the excessive use of soap and water in showers *et cetera*, and that the unintelligent use of those agents caused more damage than it prevented.

A. JOHNSON (Sydney) said that he had three questions to ask. First, in regard to aggravation: whilst aggravation might occur in preexisting dermatoses or in conditions not caused by work, there was a point at which that aggravation could no longer operate. With regard to preemployment patch tests, that had been the subject of controversy between Sulzberger on the one hand and Tulipan and Schwarz on the other, the former pointing out that the patient who showed sensitivity to common allergens was more likely to suffer from dermatitis, whilst the two latter believed that the test results were not significant because sensitization did not occur on first contact and conditions of work were not reproduced. Dr. Johnson asked Dr. Rosanove to tell of his experiences with barrier creams. He had seen people doing wet work, such as barmaids, completely protected by water-barrier creams, and in an etching works the incidence of dermatitis due to hydrofluoric acid reduced to nil from a high figure. The advice that all sufferers from dermatitis should seek other employment was perhaps too far-reaching. As had been pointed out by Tulipan, hypo-

sensitization could occur in the process popularly known as hardening, and Dr. Johnson believed that that was the most common course.

E. ROSANOVE (Melbourne), in reply, said that he was interested to hear from Dr. Johnson that hyposensitivity could develop. His impression was that the patients suffered from a relapse on return. On the question of change of occupation and loss of wages, the patient should be made to realize that he was much better off without his dermatitis although receiving a lower wage. Dr. Rosanove was stunned to hear from the President that cleanliness increased the incidence of dermatitis. While he agreed that excessive use of water and soap, especially that containing antiseptics, would increase dermatitis, he pointed out that the use of sulphonated oil and 2% wetting agent was most useful.

J. SUMMONS (Melbourne) said that the term "industrial dermatitis" should cover more than the eczematous reactions of areas of the skin exposed to some industrial irritant. He proposed to use the term "dermatogoses", suggested by Prosser White, to include the common exudative types of dermatitis as well as many other conditions which could be shown without doubt to be occupational inflammations of the skin. The conditions fell into several main groups. The first group, particularly in Australia, included the effects of electromagnetic radiation. The skin response varied with the wave-length of the radiation; thus the first group could be subdivided into (a) the effects of ultra-violet radiation, (b) the effects of infra-red radiation and (c) the effects of radiation from radium and from X-ray machines. With regard to (a), solar dermatitis presented a real problem for outdoor workers in their later years, and carcinoma might be associated with it. An unexpected example of (a) was presented by the arc welder, who might show the effects of exposure to intense ultra-violet radiation as an occupational disease, although his employment had always been indoors. With regard to (b), prolonged exposure to infra-red rays might produce bizarre pigmentation of the *erythema ab igne* type. With regard to (c), it had to be remembered that radiodermatitis was an occupational hazard. It should also be appreciated that exposure to  $\beta$  and  $\gamma$  rays from radioactive isotopes might produce skin damage. Another important and disabling group amongst the dermatogoses were affections of the nails, mainly onycholysis (frequently seen in washerwomen and people doing wet work) and perionychia (common in the food canning industry). Still another group amongst the dermatogoses were skin inflammations due to parasites. Dr. Summons concluded by saying that the whole purpose of his paper had been to bring to mind certain conditions which at times seemed to be in danger of being lost in the mass of literature appearing on the exudative forms of industrial dermatitis.

W. C. T. UPTON (Adelaide) said that Dr. Summons had shown a great deal of courage in combining occupation with cutaneous malignant disease. He had noticed that workers with tar were prone to develop keratoses and skin cancer.

H. MACMILLAN (Perth) said that the question of keratoses did not arise in Western Australia, as the Act included only accidents and conditions listed in a definite schedule. Keratoses were common in women from the goldfield, and he could recall a fireman with hyperkeratoses on his nose only, which was exposed to the heat at his furnace.

J. J. WITTON FLYNN (Sydney) said that if solar dermatitis was regarded as compensable, the gate would be thrown open to claims of a fantastic nature. Those conditions had a gradual onset, they were not accidents, and they occurred mainly in people of definite racial extraction on exposure to sunlight rather than on exposure *per se*. With regard to paronychia, the question arose of exposure at work and at home. Manicuring was another predisposing cause. If a person was constantly exposed to water—for example, workers in milk bars and hotels—that could be fairly admitted as a cause. With regard to the sex incidence, it was necessary to take into account the proportion of the sexes employed in that work.



J. Summons (Melbourne), in reply, said that he appreciated the influence of tar and of radiation as mentioned. It was not suggested that all keratoses or malignant changes were compensable, but he did draw attention to those cases in which it was fair that they should be; for example, he had seen three train drivers with severe chronic solar dermatitis limited to the side of the face exposed to the weather.

J. M. O'DONNELL (Perth) discussed industrial dermatoses in Western Australia. He said that Western Australia was not so highly industrialized as other States in Australia; consequently the incidence of industrial skin disease was less than in the eastern States. Figures taken from an insurance office showed that skin diseases represented no more than 1% of industrial accidents. A fair proportion of skin diseases for which compensation was allowed were not primarily of industrial origin. Those conditions were allowed compensation on the score of aggravation by irritants with which contact was made at work. In some such cases the condition had originally been dyshidrosis, seasonal allergy *et cetera*. Further, a certain number of affected persons were xerodermatous, and should never have entered industries which involved contact with irritating dust, liquids or fumes. Dr. O'Donnell said that when he examined a boy with xeroderma, he always advised the parents not to allow the child to take up plastering, cement work *et cetera*. Infected abrasions with secondary skin sepsis accounted for a fair number of compensation cases; harsh cleansers accounted for many more. Dr. O'Donnell gave an account of dermatitis in the following industries: mining, work with arsenic (the careless worker was begging for trouble), engineering, the cement and plaster industry, fellmongering, match-making, work with chemicals, the timber industry, canning, shoe and slipper making and tent-making, and instanced some measures that had been introduced in an attempt to prevent the occurrence of dermatitis.

A. JOHNSON (Sydney) said that in his serial determination of the arsenic content of hair, Dr. O'Donnell outdid Sherlock Holmes and Dr. Thorndyke. With regard to the arsenic industry, Dr. Johnson wanted to know whether Dr. O'Donnell had seen exfoliative dermatitis following contact dermatitis from arsenic, and also whether he had seen cutaneous neoplasms on the covered parts of the body in arsenic workers, as were seen following the ingestion and parenteral administration of arsenic over long periods. With regard to oil folliculitis, Dr. Johnson wondered whether Dr. O'Donnell had seen benefit from the use of an oil barrier cream. In one factory in Sydney that had been successfully used, but it required intelligent cooperation on the part of the worker.

J. J. Witton Flynn (Sydney) said that at the works of the Broken Hill Proprietary, Wollongong, hot pipes had been installed under the shower rooms, as mentioned by Dr. O'Donnell; but it was too early to draw conclusions

about their efficacy. With regard to the vesicular eruptions on the hands, the condition of chirotopompholyx following the ingestion of an excess of alcohol was often seen. Dr. Flynn wondered whether in the canning industry Dr. O'Donnell had seen light sensitization dermatitis following the handling of parsnips and parsnip leaves.

J. O'Donnell (Perth), in reply to Dr. Johnson, said that he had not seen any cases of skin carcinoma following contact arsenical dermatitis, nor had he seen or heard of exfoliative dermatitis amongst the patients who had contact arsenical dermatitis. They had not had much experience of barrier creams in Western Australia.

#### Clinical Meeting.

The Section of Dermatology and Industrial Medicine held a clinical meeting at the Royal Perth Hospital.

H. MACMILLAN (Perth) presented a girl, aged twelve years, with symmetrical alopecia of both eyebrows at the outer ends, the condition being diagnosed as symmetrical trichotillomania. His second patient, a boy, aged eight years, had been suffering from ichthyosis for four years; vitamin therapy (first with "Potantol", then with "Prodolon") since October, 1947, had greatly improved his condition, though the cold weather had produced an adverse effect. A third patient, a girl, aged eighteen years, had been suffering from blastomycosis affecting the eyelids and nasal cavity; treatment over a period of two years, mainly with iodides, had produced a satisfactory result.

J. M. A. O'DONNELL (Perth) presented two patients, father and son, with Darier's disease and a third with a lesion on the thigh resembling Darier's disease; he sought an opinion on the desirability of plastic surgery for the third patient's lesion. A number of opinions were expressed, the consensus being that the condition was not Darier's disease and that plastic surgery was indicated. Dr. O'Donnell then presented a patient with a lesion on the face of the type of *lupus vulgaris*, and asked for opinions regarding diagnosis. It was generally agreed that the condition was tuberculous and the administration of large doses of calciferol was advocated. A mother and child with ectodermal defect and two patients suffering from congenital preauricular sinus were presented by Dr. O'Donnell, as well as a series of others with conditions diagnosed as *urticaria pigmentosa*, *adenoma sebaceum*, *necrobiosis lipoidica*, *dermatitis herpetiformis*, *epidermodysplasia verruciformis*, *perifolliculitis abscedens et suppurativa* and *erythema multiforme* of toxic origin.

E. HABERFELD (Perth) presented a patient with a rash of long duration which appeared to be associated with the taking of "Alophen" pills. A second patient presented by Dr. Haberkfeld had an irregular circinate lesion on the flexor aspect of the forearm which was thought to be a sarcoid.

### Section of Medicine.<sup>1</sup>

**President:** A. J. Collins, D.S.O., M.C., M.B., Ch.M., F.R.A.C.P., New South Wales.

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**Honorary Secretary:** Cyril Fortune, B.Sc., M.D., F.R.A.C.P., Western Australia.

#### President's Address: Coronary Disease.

A. J. COLLINS (Sydney) took as the subject of his presidential address the problem of coronary disease. He said that coronary disease appeared to be increasing in frequency and to be covering a wider age group. There

was some evidence that congenital narrowing or development of the coronary system might account for some at least of the reported cases of coronary disease in the young. There was no satisfactory evidence of the influence of diet on the incidence of the disease. The problem of causation was unsolved. However, there was some knowledge of the factors concerned in the aggravation of coronary disease and of its effect upon the myocardium. The association of coronary disease with hypertension was well recognized. Conditions increasing the

<sup>1</sup>The meetings held by the Section of Medicine with the Section of Surgery, the Section of Pathology, Bacteriology, Biochemistry and Experimental Medicine, and the Section of Ophthalmology and the Section of Neurology and Psychiatry, have been recorded.

blood pressure embarrassed the heart by increasing the demands upon it. Diseased coronary arteries were at times unable to supply the extra blood required. Laborious work was dangerous to those suffering from coronary disease; it accelerated the progress of myocardial degeneration and frequently caused a breakdown when some sudden strain occurred. Some such cases might be examples of acute coronary insufficiency, a condition in which acute myocardial necrosis or infarction occurred. Dr. Collins was not satisfied that the mechanism of the causation of myocardial infarction in coronary insufficiency had been determined, in spite of the accepted theory. He then discussed the relationship between effort and the onset of coronary artery occlusion, referring to the work of Paterson, of Horn and Finkelstein and of Masters, Dack and Jaffe. The three last-mentioned in his opinion had offered overwhelming evidence that coronary occlusions occurred irrespective of physical activity. He believed with Masters that the intramural hemorrhages in coronary arteries, which were the usual forerunners of thrombosis and occlusion, were the result of disease only. The question was of medico-legal importance. Discussing tobacco smoking, Dr. Collins quoted the evidence for and against its importance in coronary disease; he believed that it should be interdicted. Opinions concerning alcohol were more unanimous; he believed that alcohol should be taken sparingly if at all. With regard to pain, which was frequently an early symptom, and which might be such as to declare its origin with comparative certainty (angina of effort being of that type), Dr. Collins said that when variation in the amount of effort necessary to cause angina was present early in the disease, diagnosis presented a problem. The clinical experience of the observer would be tried to the full. The diagnosis of coronary disease should not be rejected on account of an occasional variation in the quantity of effort necessary to provoke pain. The pain was a sense of constriction or weight rather than of a stabbing or cutting nature. The speaker described in some detail the situation and the variations in type of the pain. He said that pain and vague precordial discomfort of a premonitory nature sometimes preceded an occlusion even by months. Repeated complaints of pain over the heart as an isolated symptom by a middle-aged or elderly person should be treated with great respect. Severe angina of effort commencing suddenly and of severe extent *ab initio* was a harbinger of impending occlusion. The chief problems of coronary disease were causation, control and prevention.

M. C. DAVIS (Melbourne) discussed heart pain, its synthesis and analysis. He said that pain was an entirely subjective symptom, and suggested that in the elucidation of the problem of pain suspected of being of cardiac origin two processes of thought should be used—analysis and synthesis. Discussing first analysis, he said that each of the conditions which produced pain of the same anatomical distribution as cardiac pain had to be considered; they were neuritis, myositis, subdiaphragmatic conditions, functional conditions, thoracic disorders of non-cardiac origin and coronary disease. During the analysis many factors aggravating cardiac pain might be discovered, distributed in the following manner through the categories mentioned: (i) Neuritis: (a) posterior root lesions, either vertebral lesions such as disk lesions and spondylitis, or intraspinal lesions; (b) peripheral lesions, such as lesions of the intercostal nerves or the left shoulder or frank peripheral neuritis. All neuritic conditions might be aggravated by psychosomatic factors. (ii) Myositis: (a) pectoral, (b) costochondritic (aggravated by focal sepsis) or (c) sternal. (iii) Subdiaphragmatic conditions: (a) gastric lesions, (b) gastric distension (aggravated by psychosomatic factors) and (c) gastric dysfunction. Gall-bladder and other disorders might be involved. (iv) Functional states: hyperventilation, which might be aggravated by psychosomatic factors. (v) Thoracic disorders: (a) mediastinal emphysema, (b) lung lesions and (c) oesophageal lesions. (vi) Coronary disease: (a) angina, (b) thrombotic lesions. Dr. Davis then said that the method of synthesis should be applied when the pain was of cardiac origin. To over-simplify the significance of true cardiac pain and think only in terms of angina and

coronary disease might result in serious errors in prognosis and treatment. It was necessary to carry the investigation further, to determine not only whether coronary damage was present, but also to what extent it affected the circulatory efficiency. Thus the effect of the coronary lesion on myocardial efficiency, and the significance of the added stress produced by valve damage, all formed part of the picture. That meant that the total concept had to be built up from individual units; that formed the synthetic approach. The age of the patient, the size of the heart and the blood pressure were not to be taken separately as either indications or contraindications in treatment or prognosis.

ELLIS MURPHY (Brisbane) read a paper on precordial leads in coronary disease, in which he first briefly traced the history of the precordial leads. He said that precordial leads were found to give evidence of myocardial disease in some 16% to 20% of cases in which normal tracings were obtained from the classical leads. The precordial exploring electrode gave information concerning the myocardial activity of the underlying ventricular wall. Much information was obtained from the axillary leads CR6 and V6. Much new interest had been shown in electrocardiography since the expanding use of the precordial leads.

J. G. SLEEMAN (Adelaide) discussed the treatment of coronary disease and its complications. He said that coronary disease was not amenable to drug treatment, and ultimate heart failure was the inevitable result. Treatment was directed rather to conservation of the efficiency of the heart than to improvement of the coronary circulation. The steady downward course of the arterial disease might be interrupted by one or all of three episodes, which were alike in being manifestations of cardiac ischaemia, but which differed in the duration of the ischaemia and in the circumstances in which the ischaemia was produced. The first episode was angina, the exciting cause of which was almost invariably effort, aided in many cases by cold weather or a full stomach. Predisposing causes were hypertension, diabetes, obesity, anaemia, hyperthyroidism and tachycardia. Prophylactic measures included abstinence from tobacco smoking, the avoidance of effort and the use of vasodilator drugs of prolonged action. Curative measures included the chewing of trinitrin tablets and cessation of the provocative effort. The second episode was acute coronary insufficiency provoked by the mere effort of rest in bed. Treatment was by complete rest in bed, the use of quickly acting vasodilators such as papaverine and aminophyllin, and the inhalation of oxygen. The third episode was cardiac infarction, a grave condition with uncertain outcome. The first points in treatment were to relieve the pain by the administration of morphine and papaverine, to put the patient at complete rest, to prevent vagus vasoconstriction with atropine, and to administer oxygen in full strength. A suitable diet should be given, the bowels should be opened with paraffin if abdominal distension was present, and the patient should be allowed to use the commode after a few days if he resented the bedpan. The formation of venous thrombi in lungs and limbs should be prevented by making the patient take eight deep breaths four times a day with his knees flexed. The patient was kept in bed for six weeks, and allowed to sit about for six weeks and to potter about for a further six weeks before returning to work, which naturally had to be infinitely lighter than formerly. There were a number of complications. Cardiac failure with congestion was treated in the usual fashion. Cardiac aneurysm was not amenable to treatment. Anuria of shock might lead to uraemia, and peritoneal dialysis might be suitable treatment. Quinidine given prophylactically was useful in the prevention of disorders of rhythm. Thrombo-embolic phenomena might be prevented by the use of anticoagulant drugs such as "Dicumarol"; the last measure involved periodic estimations of the prothrombin time.

H. S. LUCRAFT (Perth) in opening the discussion, said that there was one point in treatment on which he required an opinion; that was the use of vitamin E. It had been alleged that the administration of vitamin E had given good results, but his own experience had not confirmed that observation. Subsequent information

indicated that the use of the natural preparation was necessary in order to obtain good results. He had used the latter and the results did seem to be far more impressive than had been obtained with the synthetic preparation. Another problem was that of prognosis, particularly with regard to what should be told to the patient. He himself found it very difficult to prophesy, despite the fact that others appeared to attempt to do so. As an instance of the difficulty, he referred to a patient who had been examined by another practitioner and had been advised of the serious nature of his condition and told to put his affairs in order. Being an old soldier, he decided to make adequate preparations, and he bought and lived with a coffin for twelve months before he sought further advice. Obviously in that particular instance there had been no consideration of the patient himself, and had it not been for the equability of the man very serious damage would have resulted from the advice given to him. Dr. Lucraft considered that it was of the utmost importance to adopt a humanitarian attitude to all patients suffering from disease of the coronary arteries, and that the disease was so uncertain in its course that it was impossible to prophesy accurately. The prevention of fear was of very great importance to all patients, and particularly to those of an apprehensive, nervous personality.

KEMPSON MADDOX (Sydney) expressed his appreciation of the privilege of listening to the papers, and referred particularly to the comprehensive survey given by the President. He drew attention to the importance of bearing in mind the increased longevity of the general population in the assessment of any increase in the incidence of the disease. He considered that the antibiotics had played their part in the increased incidence of coronary disease because of that effect. In differential diagnosis there were two conditions which should be particularly remembered, the first being hiatus hernia, an elusive pathological entity which was far more common than had been realized. It was necessary to search for it in all atypical cases of precordial pain. The other condition was thoracic radiculitis, which was characterized by pain at night, on turning and on percussion of the spine, and by costo-chondral tenderness. Alcohol was a vasodilator and in small amounts might be advantageous. Tobacco smoking was harmful to those sensitive to it, but the dispute remained unsettled. Dr. Maddox considered that the use of the precordial leads as described by Dr. Murphy was an advantage, but involved much additional work. He thought it unnecessary to use all the leads, but considered that leads 2, 4 and 7 were the minimum requirements. In treatment he favoured the use of intravenously administered papaverine to relieve pain. Plasma was useful in the treatment of patients suffering from shock. "Dicumarol" had a definite place in treatment, but he did not favour the production of very low levels of prothrombin. In any case "Dicumarol" could be used only when adequate laboratory facilities were available.

DOUGLAS THOMAS (Melbourne) quoted Ryle as stating that there were two matters for doctors to consider—the study of disease in man and of man in disease—thereby stressing the importance of approaching all patients from the human angle. A doctor had to understand his patient and teach him a new way of living, in which he would readjust his work in order to live, work and enjoy life within certain limitations. He referred to a man who, when known to have definite coronary disease, was advised to be sensible, to take life steadily and to live within his limitations. When the patient asked what the outlook was he was told that it would be wise to review things in ten years. That was done. A further check was made to exclude hiatus hernia by fluoroscopic examination with the patient in the Trendelenburg position, a thick barium bolus was given to exclude dysfunction at the cardia, and no abnormality was detected. The patient was therefore again told that no evidence could be found to indicate any impending catastrophe, but that he should not expand his business interests, but rather consolidate them and enjoy life within his limitations. In summary Dr. Thomas considered that in coronary disease it was more important to consider the man in disease than the disease in man,

and that the old family practitioner attitude was the best to adopt. Dr. Thomas was of the opinion that investigation of the problem of the course and prognosis of the disease must be planned on a very long range. In rare circumstances there did appear to be evidence that reversible changes related to nutrition were possible. A long-range experiment should be planned if the matter was to be elucidated.

SIR CHARLES BICKERTON BLACKBURN (Sydney) was asked to speak and said that he had listened with interest to the papers and discussion. He considered that one of the disasters resultant from modern investigations was the tendency for the patient to be frightened by their results. Prior to electrocardiography good advice had usually been given, but it was more difficult under present conditions to give good advice, particularly if an abnormality in the electrocardiogram was admitted to the patient. Even more pronounced was the tendency for the patient's own doctor to be alarmed by an abnormal electrocardiogram. Sir Charles Blackburn knew a man who had had a very abnormal electrocardiogram for more than eighteen years and who had recently run across the road in front of his motor-car. That man enjoyed reasonable health, occasionally requiring trinitrin to relieve anginal pain. Another point which Sir Charles Blackburn stressed was that one should not take too seriously what a patient reported that another doctor had said about prognosis. It was quite possible for the patient who was given an indefinite prognosis to pick on one aspect of it; one patient had died on the very day on which the wife expected his death, because he had been told that he might live for twelve months.

F. W. CARTER (Perth) asked whether phenacetin or similar preparations used as sedatives were of importance from the point of view of the production of anoxia. He thought that that might be a subject for research, because of the enormous quantities used, particularly by young women. Methemoglobinemia was possible as a result of the taking of such preparations.

The President, in reply to Dr. Carter's question, agreed that phenacetin poisoning was a common condition, readily recognizable by the blue lips *et cetera*, but that acute coronary insufficiency was always found to be associated with coronary disease, and sedatives of the type mentioned were consumed particularly by young adults or by those in the twenty to forty year age period. Coronary insufficiency was an acute emergency occurring in an older age group, and it was only in that group that one might expect methemoglobinemia to be an important contributory factor in the production of that condition.

#### Rheumatic Fever.

The Section of Medicine held a symposium on rheumatic fever.

CYRIL FORTUNE (Perth) read a paper on the epidemiology of rheumatic fever and some of its public health aspects. He mentioned first the known factors concerning the epidemiology of rheumatic fever and discussed their relative importance. He said that no one had yet been able to label one of the many types of pathogenic streptococci as the epidemic strain responsible for rheumatic fever. He believed that the most important environmental factor must surely be overcrowding. Dr. Fortune then referred to the theory of bacterial allergy in the aetiology of rheumatic fever; he considered the theory attractive, but thought that for the present acceptance should be withheld. He went on to discuss the biochemistry of the changes in the connective tissue due to tissue hypersensitivity, and also the pathological changes in the connective tissue. He said that the anti-rheumatic effect of the salicylates had been found to be linked with their inhibition of hyaluronidase, and further, that the serum of rheumatic patients and those with sore throats due to the presence of hemolytic streptococci had inhibitory power greater than that of normal persons; that suggested that the study of interstitial mucopolysaccharides and of their relation to rheumatic disease was a promising field of investigation. He stressed the fact that rheumatic fever



was a smouldering disease with many recrudescences over a long period of time. A review was then presented of the work done by the London City Health Department in organizing care for the rheumatic child, and of the State programmes for the care of rheumatic subjects in the United States of America. Dr. Fortune then suggested that those schemes should form the basis for a plan to be considered, to make available services for the care of subjects of rheumatic fever and rheumatic heart disease in Australia.

F. M. BURNET (Melbourne) said that he was interested in the pathogenesis of rheumatic carditis and that it was possible that other factors than streptococcal infections were responsible for the conditions; but undoubtedly the importance of streptococcal infection was established. A problem in that connexion was the relation of streptococci in infections of the throat to the actual rheumatic manifestations. Hyaluronidase certainly played some part, but there was no definite indication of how large that part was and to what extent allergy entered into the problem. Professor Burnet considered that the condition was not a direct effect of the bacteria or their products and that sensitization played some part. There was no doubt that in the prophylactic use of sulphonamides the streptococci carried in the throat became resistant, without the sulphonamides' losing their effect in preventing or reducing the frequency of relapses.

M. DAVIS (Melbourne) commented on a recent report with regard to the importance of streptogenine, a member of the vitamin B complex, in relation to the development of hæmolytic streptococci. Undoubtedly hæmolytic streptococcal infections were affected by the state of nutrition of the population and by social conditions, and he thought that the importance of streptogenine might lie in the altered social conditions associated with crowding and poor nutrition.

M. KELLY (Melbourne) considered that little progress had been made during sixty years. He quoted Poynton as stating in 1910 that he was not convinced that rheumatism was not a specific infectious disease, and in 1936 that he still believed it to be infective in origin, but was awaiting better evidence of specificity. Dr. Kelly was pleased to hear Dr. Fortune quote Dr. May Wilson as being unconvinced that the disease was due to infection with hæmolytic streptococci; 60% of cases followed infections of the throat in children. In adults the precipitating factors were often not in the nature of streptococcal infections, and as described by Copeland, cases occurring in the Western Desert were precipitated by such diverse conditions as malaria, exhaustion, boils, relapsing fever *et cetera*, and streptococcal infections occurred in only 15%. It was therefore possible that rheumatic fever was due to a virus disease. Dr. Kelly also drew attention to the similarity between rheumatic fever and arthritis occurring as a result of prophylactic inoculations or injection of serum, and pointed out that many cases of serum disease were indistinguishable from rheumatic fever. He had seen rheumatic fever occurring in a man, aged fifty-five years, following injection of horse serum, and considered that the same type of condition could result from vaccines.

KEMPSON MADDOX (Sydney) said that until 1928 Poynton had held that streptococcal infections were of paramount importance and he had kept the streptococcal hypothesis alive. To some extent his views were justified. He also believed that nutrition was of greater importance in European countries than in Australia, that overcrowding was important, and particularly in relation to patients with infection of the upper respiratory tract, which so often gave rise to rheumatic fever in susceptible individuals. However, there were other portals of entry than the throat, and he also considered that the disease in the adult differed from that in the child.

KEMPSON MADDOX (Sydney) read a paper on the subject of some clinical aspects of rheumatic fever, in which he laid stress on the need for the clinician to be on the alert for the beginnings of acute rheumatism, to manage the victims and to support the crippled. He repeated an appeal made at the fifth session of congress, that rheu-

matism should be made a notifiable disease and that a broad public plan should be formulated to combat the greatest killer of young adults in the years of promise. He discussed in detail the atypical signs and symptoms of the rheumatic state in its latent and active phases, and presented an evaluation of laboratory aids in diagnosis and control. He said that an onset under the age of four years was uncommon; the peak age of onset was about six years. The average age risk of a major recurrence was 25% among patients aged between four and thirteen years, 9% among patients aged between fourteen and sixteen years, and 4% among patients aged between seventeen and twenty-five years. Females tended to harbour subclinical infection longer than males; but both sexes were affected equally up to adolescence. The clinical course and ultimate outcome in any given case were unpredictable. Thus if a rheumatic subject could be protected up to the age of eighteen years, or if the number of acute episodes could be reduced to a minimum, the chances of his entering adult life with a badly damaged heart would be considerably lessened. Dr. Maddox then suggested five components of a prophylactic programme: (i) the correction of environmental factors; (ii) the reduction of streptococcal infection in the patient and in his contacts; (iii) the reduction of streptococcal concentration in dust and blankets; (iv) the prevention of fatigue; (v) the care of the child in a special hospital and by the almoner. Referring to climate, Dr. Maddox said that the value of sending rheumatic children to warmer or tropical climates was seriously in question. Often a fresh recrudescence occurred on the child's return home; such dislocation was generally expensive and unpractical, and might lead to a loss of acquired streptococcal immunity. All the prophylactic measures mentioned might cost too much for individual or private agencies or even for individual hospitals. Rheumatic fever and rheumatic heart disease would have to be accepted as public and community health problems, requiring broad planning and determined organization.

L. H. HUGHES (Sydney) expressed the opinion that although it was a bad habit to diagnose mitral incompetency when a systolic bruit was heard at the cardiac apex, it was nevertheless of considerable importance if the bruit was found early in rheumatic fever. If there were suggestive symptoms of cardiac infection and apical systolic bruit, and especially if a triple rhythm was also present, a diagnosis of rheumatic disease of the heart should be made. In every case in which an apical systolic bruit was present, the patient's condition should be reviewed frequently. The monarticular type of rheumatic fever sometimes resembled tuberculous infection. In the speaker's experience cutaneous manifestations were uncommon and he had seen only two cases of *erythema marginatum*. The condition of a patient who presented with an acute exacerbation of rheumatic carditis sometimes closely resembled the clinical picture of subacute bacterial endocarditis. The latter type of illness was characterized by pallor, obviously serious illness, a high temperature which was often persistent, cardiac murmurs, enlargement of the spleen, and the presence of red blood cells in the urine. No microorganisms, however, could be grown from the blood—there was no response to penicillin, which often appeared to aggravate the position.

Kempson Maddox (Sydney), in reply, agreed that the fulminant cases were often very difficult to distinguish and to manage, and that a decision regarding the use of penicillin could be difficult.

DOUGLAS J. THOMAS (Victoria) read a paper on the present status of penicillin therapy in the treatment of subacute bacterial endocarditis. He said that the principles involved in this form of treatment were the rapid establishment and maintenance in the blood stream of such a concentration of the drug as would be adequately bacteriostatic, the continuance of treatment not merely until the blood stream was sterile, but until every colony within the vegetations on the valves had perished and, as well, the continuance of treatment and supervision during the period in which there was danger of relapse. He stressed the fact that successful treatment required close

cooperation between physician and bacteriologist. Discussing the determination of dosage, Dr. Thomas said that the in-vitro sensitivity of the organism to the drug had relatively little bearing on the outcome, but it was a rough guide as to the daily dose of penicillin required. A basic dose of one-half mega-unit of penicillin daily for two weeks might be expected to control the infection in a very high percentage of patients. The treatment of relapses required four times' that daily dosage for twice as long. In resistant infections, if adequate bacteriostatic serum levels of penicillin were maintained for long periods, therapy failure might be converted to therapy success, even though a dose of 10, 15 or even 20 million units per day was required. Dr. Thomas presented details of the clinical histories of 11 patients treated in Melbourne, of whom five had died and six were controlled and appeared to have recovered.

A. W. MORROW (Sydney) asked whether Dr. Thomas considered that the courses of penicillin which he had recommended were really adequate and safe in the initial illness. Dr. Morrow himself wondered whether it would not be better, because of the gravity of the illness, to give a more prolonged course and higher doses of penicillin. He also wished to know what was considered to be an adequate prophylactic dose of penicillin in the presence of sepsis and whether the use of sulphonamides was of any advantage.

R. WATSON (Melbourne) requested information regarding the mode of administration of penicillin and the spacing of the individual doses.

C. FORTUNE (Perth) asked whether organisms had been recovered from the blood in the majority of the cases with which Dr. Thomas had been concerned, and what his procedure would be in the presence of clinical signs unsupported by a culture.

M. DAVIS (Melbourne) said that he had been concerned with the teaching of dental students for several years and had stressed to them the importance of dental sepsis as a cause of subacute bacterial endocarditis. In 33 fatal cases of the disease dental infection had preceded the occurrence of the endocarditis. Dr. Davis stressed the importance of cooperation between physicians and dentists and considered that large doses of penicillin (200,000 units every four hours) should be given preceding, during and after dental extractions. He thought that it was better to use penicillin wastefully than to run the risk of the occurrence of endocarditis. He had recommended the extraction of all teeth under the protection of penicillin in preference to the extraction of smaller numbers of teeth.

G. PENINGTON (Melbourne) disagreed with Dr. Davis about the extraction of many teeth at one time, and referred to the work of Okell and Elliot, who had shown that the presence of bacteraemia increased in frequency in the presence of oral sepsis and when multiple extractions were performed. Dr. Penington considered that it was unjustifiable to submit patients to the risk of bacteraemia if it could be avoided, and that antibiotics should be used prior to, during and after dental extractions. Okell and Elliot had shown that even prior to extractions organisms could be recovered from the blood when marked oral sepsis was present. It was therefore necessary to decrease oral sepsis as much as was possible prior to any extractions covering that period with sulphonamides or penicillin, to extract as few teeth as possible at one time, and to cover the whole period with one or other of those preparations. Dr. Penington agreed with the dosage recommended by Dr. Thomas in the treatment of the initial attack of subacute bacterial endocarditis, provided that there was an adequate clinical response during the first week of administration of penicillin. If there was no prompt response, then it was necessary to increase the dose and to prolong the period of administration. Dr. Penington also made a plea for great care in the management of those patients and of patients who had suffered from rheumatic carditis. He was of the opinion that in many cases invalidity was unnecessarily caused by excessive caution. After there had been an adequate period of convalescence, which might be as long as twelve months or

more, it was necessary to encourage the patient to undertake as much exertion as possible, always living within the limits of his tolerance. Dr. Penington referred to two patients who exemplified the degree of recovery which could occur. The first of them was a woman, who had suffered from subacute bacterial endocarditis in 1926 and recovered spontaneously, the report having been published in THE MEDICAL JOURNAL OF AUSTRALIA in 1930. That patient resumed her normal occupation and had led a normal life since that time. The other patient was a young man, who had suffered from several attacks of rheumatic carditis, and subsequently, although not on medical advice, had played lacrosse without any ill effect. When he was examined eight years after his illness there was no appreciable alteration in his cardiac condition, although he had a gross degree of aortic regurgitation. That man had certainly undertaken far more exercise than would have been permitted, but in all probability had benefited by his exercise. Dr. Penington pleaded for the avoidance of undue restriction on the patients after recovery from their acute illness.

ELLIS MURPHY (Brisbane) agreed that penicillin should be administered for forty-eight hours prior to the extraction of teeth and that the administration should be maintained for at least twenty-four hours after the operation. He asked whether sulphonamides were used by Dr. Thomas after apparent cure had been achieved by means of penicillin; it had been his own practice to continue with sulphonamides for a period of twelve months or more.

D. Thomas (Victoria), in reply, said that the initial course of penicillin must be determined by the occurrence of prompt sterilization of the blood stream as manifest by failure to recover organisms from the blood. If that state was not obtained, it was necessary to increase the dose and to prolong the course. The factors underlying the arrangement of dosage were, firstly, the nature of the organism and its sensitivity to penicillin; secondly, the assessment of a satisfactory bactericidal level of penicillin in the blood; and thirdly, the production of such a level by fourfold increase in the dose of penicillin, should that be necessary. Dr. Thomas said that he had worked for a considerable time with Dr. J. Monahan Lewis, a dentist, who was an authority on oral sepsis. Dr. Lewis was emphatic that no teeth should be extracted unless and until the periodontal tissues were healthy. The treatment of the condition of the gums could in itself cause bacteraemia, so that great care was necessary even during that procedure. When the gums were in reasonably satisfactory condition, X-ray examination of the teeth was carried out and extractions were limited to those teeth which showed evidence of apical infection. The extraction of teeth was covered by the administration of penicillin at three-hourly intervals in doses of 100,000 to 200,000 units per day for two days before the extractions and for forty-eight hours afterwards, provided that the extractions had not resulted in severe damage to the jaw. However, if there had been technical difficulties in the extraction of the teeth, it was necessary to give the increased dosage and to continue it for a period of four days. When penicillin was administered, it was necessary to ensure that there was no arithmetical error in calculating the doses and that the minimum quantity of solution necessary to dissolve the penicillin was used. The smaller the quantity which required to be injected, the better for the patient. In odd cases resistance to penicillin was present, and if there was any doubt it was better to give the larger dosage. Even if no organisms could be recovered from the blood, Dr. Thomas would still administer penicillin if he was satisfied that the patient was suffering from subacute bacterial endocarditis. He agreed with Dr. Hughes regarding the presence of red blood cells in the urine in cases of acute rheumatic carditis, and pointed out that that was merely one further indication that rheumatic fever was a generalized process in which there were widely disseminated pathological changes instead of lesions confined to the heart only.

LAWRENCE STOKES (Melbourne) presented a paper on the role of sulphanilamide prophylaxis in rheumatic fever, which was concerned chiefly with the problem of reduction



in recurrence rate. The paper was read on his behalf by J. H. COLEBATCH (Melbourne). Sulphonamide prophylaxis was based on the general conception that rheumatic fever was a specific response to a group A hemolytic streptococcal infection occurring in a person, usually a child, possessing an inborn or inherited susceptibility. The streptococcal hypothesis, however, was not unanimously accepted. Sulphonamide prophylaxis had been begun four years previously at the rheumatic clinic at the Children's Hospital, Melbourne. Dr. Stokes gave details of the number of children treated, their ages, the dosage and the duration of treatment. In Victoria there was no pronounced seasonal variation either in the time of onset of the first attack or in the tendency to relapse. Prophylaxis was carried out continuously during the whole period of each year. He stressed the fact that sulphonamide should not be given during the active stages of the disease, and treatment should not be commenced until a state of clinical quiescence had been reached. Administration of sulphonamides during activity tended to excite the rheumatic process. No definite answer could be given to the question of how long treatment should be continued; but experience at the clinic suggested three or four years or longer, especially if the original attack had occurred early in the child's life. Some recurrences took place several years after the original attack. There was a greater percentage of relapses in the second year than during the year immediately following the initial rheumatic episode. In the series of 211 patients at the clinic, two children had recurrences some months after the cessation of sulphonamide prophylaxis. The group A streptococcal carrier rate was significantly reduced, as was the recurrence rate. Sulphonamide was also used as a "cover" to protect children with a rheumatic history who were undergoing extraction of teeth or tonsillectomy. Dr. Stokes said that opinion at the clinic was that the work had passed beyond the experimental stage and that all suitable children with a history of rheumatic fever who were willing to cooperate should be given the benefit of sulphonamide prophylaxis, provided it was carried out under careful supervision.

A. J. COLLINS (Sydney) asked whether there was any evidence that children who suffered from relapses whilst receiving sulphonamides prophylactically developed less severe general or cardiac manifestations.

A. B. WEBSTER (Perth) asked whether tonsillectomy was still practised as a prophylactic measure in the care of patients who had recovered from an attack of rheumatic fever.

A. R. EDMONDS (Perth) said that he had observed that sulphonamides were harmful during an attack of rheumatic fever and asked the reason. In Perth there was convincing evidence of the efficacy of sulphonamide prophylaxis, and it had become customary to give sulphonamides to all patients who had suffered from rheumatic fever; but he wondered whether some at least of the effect might not be due to the careful observation of patients which was essential in that procedure. He considered that care for nutrition and the general living conditions was also of considerable importance, and he could produce figures resulting from such attention comparable to those obtained by the use of sulphonamides. He was convinced from his observations that the importance of social conditions was increased in colder climates, and had noted that there was a much greater spread over the social scale in Queensland and Western Australia than in the States with a colder climate. He also referred to 173 families, in 53 of which there was a definite history of rheumatic infection in the parents.

L. J. A. PARR (Sydney) asked what was the percentage of reactions encountered during the course of prophylactic treatment, and whether one type of sulphonamide was more productive of reactions than another. He also requested information regarding types of reaction.

G. PENINGTON (Melbourne) asked whether an explanation could be given of the apparent anomaly shown in one of the charts illustrating the relapse rate in patients under treatment compared with controls—namely, a higher relapse rate in treated patients than in controls in the fourteen-year-old age group.

F. M. Burnet (Melbourne), in reply to Dr. Penington's question, said that he had discussed the matter with Professor S. D. Rubbo, who considered that the anomaly was due to the small number of cases concerned at the age; they had been transferred from the Children's Hospital to a hospital for adults.

J. H. Colebatch (Melbourne), who had read the paper for Dr. Stokes, replied that reactions had occurred in less than 5% of cases and that leucopenia was the only important one. In order to obviate it, the blood was examined at weekly intervals for six weeks and thereafter at monthly intervals, and in no cases had it been necessary to stop administration of the drug. Dr. Colebatch considered that it was immaterial which sulphonamide was used, but sulphadiazine was the drug of choice at the time of the investigation. He could not say whether the relapses had been any more severe in patients under prophylactic treatment. The duration of treatment was uncertain, but he considered that it certainly should not be discontinued until the patient was quite well. Tonsillectomy was not performed as a routine measure after the first attack of rheumatic fever, and rheumatic fever was not in itself an indication for tonsillectomy. Dr. Colebatch quoted a series of 1000 children who had been referred to a group of paediatricians for opinion whether their tonsils should be removed. In 50% of cases the operation was recommended. The remaining patients were referred to another group, and of these 50% were recommended to have their tonsils removed. Of the remainder another group of paediatricians recommended tonsillectomy in approximately 50%. That provided adequate comment on the question of tonsillectomy.

A. J. Collins (Sydney), as President of the Section, pointed out that the problem of the control of rheumatic affections of the heart was evident, and that it was necessary to make a start regarding the measures to be adopted with that object in view. He therefore submitted the following resolution:

That it be a recommendation of the Section of Medicine through the Executive of the Congress to the Federal Council of the British Medical Association in Australia that rheumatic fever be made a notifiable disease throughout the Commonwealth, as the first step towards the implementation of State programmes for the recognition and care of sufferers from this disease.

Cyril Fortune (Perth), as Secretary of the Section, seconded the motion, saying that despite the disadvantages of notification, it provided a means by which statistics could be obtained in order that the problem could be presented for action.

The motion was submitted to the meeting of the Section and was passed unanimously.

#### Water Balance.

J. G. HISLOP (Perth) read a paper on some clinical aspects of water balance. He said that his main purpose was to emphasize the part played by the anti-diuretic hormone in the causation of migraine, of premenstrual and menopausal headache and of the condition of cerebral water-salt retention obesity. The administration of fluid should be controlled by a full knowledge of the state of the blood. The continued use of diuretics should be governed also by the haemoconcentration and by the level of protein in the blood plasma. The elimination of fluid from the body might at times be better effected by control of the intake of sodium chloride or by the use of ammonium chloride. Premenstrual headache might be relieved by reduced intake of fluid and sodium chloride, and by the administration of ammonium chloride. Premenopausal headache was probably related to the uninhibited action of the anti-diuretic factor, the origin of which was the lessening of oestrogenic production. In the first stages the oestrogen might be activated by the administration of *corpus luteum*; but as the failure of ovarian activity became established oestrogen administration became necessary. At that stage, however, testosterone propionate had proved effective. Menopausal headache was related to the increased activity of the anti-



diuretic factor of the pituitary following cessation of oestrin production in normal quantities, and was relieved by the administration of oestrin. The water retention of a pregnant diabetic was the result of low production of oestrin, which allowed overaction of the pituitary gland, and was controlled by the administration of oestrin in large doses accompanied by progestin. It was suggested that the water-salt obesity of Zondek was the result of overaction of the pituitary gland, particularly the anti-diuretic factor, and that it might be treated by the administration of large doses of oestrin at least twice a week over a period of three months. The theory was discussed briefly in relation to the male.

L. J. A. PARR (Sydney), commenting on Dr. Hislop's paper, said that he had noticed that retention of water occurred premenstrually in patients suffering from rheumatoid arthritis. Of interest was the German report that dough kneaded by women during the premenstrual period was less satisfactory than under other conditions, and also that flowers packed by women premenstrually withered much earlier than otherwise occurred. He had noticed a gain in weight of two to three pounds premenstrually and during premenstrual migraine. He had given dry pituitary extract in doses of six grains per day to one patient, with relief for a period of twelve months, and another patient had been relieved by restriction of salt, although "Gynergen" had been required previously.

J. G. Hislop (Perth), in reply, said that if whole pituitary gland relieved migraine, the whole of his theory regarding the aetiology of many cases of migraine collapsed, unless it could be shown that the administration of whole gland substance depressed the activity of the pituitary gland in the same way as oestrin. He regretted that it was quite impossible under present conditions accurately to test the suppositions which he had elaborated in his paper, owing to a complete lack of laboratory facilities and of personnel skilled in the estimation of the hormone content of the serum.

#### Continuous Postural Drainage.

L. BEDFORD ELWELL (Brisbane) read a paper on continuous postural drainage. He said that natural means for clearing accumulated secretions from the respiratory passages, whether the tracheo-bronchial passages or the sinuses, were inadequate, and described the anatomical circumstances due to man's adoption of the erect posture which brought about the tendency of secretions to accumulate in cavities at the opposite ends to their natural outlet. The postulated existence of a peristaltic action of the bronchi was very doubtful. Intermittent postural drainage several times a day had in the past been the recognized method of postural treatment. The method did not drain the secondary or tertiary bronchi, which were those affected in bronchiectasis, and was most uncomfortable. The idea of continuous postural drainage, the patient to remain in the approved posture for hours at a time instead of minutes, had been described by Ewart in 1901. In 1934 Nelson described a means by which the patient could be kept comfortably in the approved posture; a bed was devised in which the patient would lie at an angle varying between 20° and 30°, the legs at the lower end having adjustable inner tubes so that the foot of the bed could be raised eighteen inches. Dr. Elwell suggested that in most cases the group of conditions included in such terms as chronic non-tuberculous bronchitis, which progressed chiefly by acute exacerbations usually brought about by intercurrent infections, were due to an inflammatory disease originating in the incomplete resolution of an initial acute pulmonary lesion, whether bronchitis, pneumonitis or bronchopneumonia. The original lesion frequently occurred in early childhood or infancy, but might occur not uncommonly in later childhood or adolescence, or with diminishing frequency at any period during the rest of life. Recovery from the early lesion might appear complete, and no ill-health ensued until the permanent lung damage was aggravated by a sufficiently severe fresh infection later during life. It was suggested that the disease might be chiefly due to the persistence of a residuum of accumulated secretions brought about by physical difficulties in effecting their evacuation; such a

pathogenesis was thought to apply equally well to most inflammatory diseases of the paranasal sinuses. If adequate continuous postural drainage was used in the initial acute phases of respiratory infections, not only would recovery be expedited, but the genesis of the progressive inflammatory diseases to which reference had been made might be largely inhibited. If the condition progressed and became chronic, immense benefit might still accrue from perseverance with the treatment at any stage, even when the condition had advanced to generalized pulmonary fibrosis with emphysema and incipient pulmonary heart failure. The family doctor should make himself familiar with the main principles and consistently supervise their application in the patient's home. The method, if constantly employed in the treatment of all diseases of the respiratory tract including asthma and hay fever, should be of help in preventing the development of the grave chronic disabilities which were all too prevalent.

G. PENINGTON (Melbourne) thanked Dr. Elwell for his provocative paper, which had put forward an unusual type of procedure to be adopted in cases of chronic pulmonary infection and dysfunction. Dr. Penington disagreed strongly with Dr. Elwell's contention; he held that postural drainage was applicable only in conditions in which there was either a cavity communicating with a bronchus, or abnormal bronchial anatomy with defective mucous membrane, loss of elastic tissue or destruction of muscle resulting in loss of normal physiological means of removing secretions from the more distal portions of the bronchial tree. The normal bronchi by means of their ciliated epithelium were able effectively to move their contents towards the larger bronchi and normal expectoration resulted. If dysfunction of the bronchi was present, as for example in asthma or other conditions associated with bronchial spasm, any difficulties in drainage were overcome by means of respiratory exercises, in which particular stress was to be laid on forced exhaling. The latter procedure had an effect somewhat comparable to squeezing a sponge, and greatly facilitated the removal of thick secretions from the bronchial tree. Too much importance could not be placed on the necessity for respiratory exercises, initially under supervision, in all instances of chronic pulmonary infections and asthma. Brock's beautiful work on the anatomy of the bronchial tree in relation to acute and chronic infections, which had been mentioned by Dr. Elwell, emphasized the importance of posture in relation to pulmonary infections occurring as the result of bronchial embolism, and Dr. Penington emphasized the importance of that work in relation to the oft-repeated statement that bronchiectasis and the like were due to infections of the upper part of the respiratory tract. Brock had demonstrated that the broncho-pulmonary segments which would be affected as the result of the passage of infected material from the sinuses to the bronchi were: (a) if the patient was in the lateral position, the axillary segments of the subapical and pectoral bronchi of the upper lobes; (b) if the patient was in the dorsal position, the apical segments of the lower lobes. Those segments were in fact relatively immune from involvement in cases of bronchiectasis. Furthermore, Dr. Penington asserted that he had never been convinced that correction of an upper respiratory tract infection had eradicated bronchiectasis, although it certainly could prevent aggravation of an existent lesion. His contention was that, in bronchiectasis and in allergic diseases affecting the respiratory tract, the abnormality of the mucous membrane was general, and upper respiratory tract abnormalities were not responsible for the abnormalities of the bronchial tree.

L. Bedford Elwell (Queensland), in reply, expressed the opinion that Dr. Penington's comments did not affect his contention that continuous postural drainage obtained by raising the foot of the bed was applicable to infections of both the upper and the lower parts of the respiratory tract, and that it minimized intercurrent infection and relieved chronic pulmonary catarrh whilst giving relief in cases of asthma. He had followed up patients for thirteen years, and was convinced of the efficacy of the treatment; the patients were satisfied.

### Gold Therapy in Rheumatoid Arthritis.

L. J. A. PARR (Sydney) read a paper on gold therapy in rheumatoid arthritis. He said that he proposed to follow the majority of authorities and include under the heading of rheumatoid arthritis, infectious arthritis and Still's disease, excluding ankylosing spondylitis. The variability of the clinical pattern was evident in relation to the many structures involved—skin, periarticular tissues, synovial membrane, articular cartilage and subchondral bone—while muscular hypertonicity or hypotonicity might be present. The plasma protein content might vary from the normal a great deal or very little; the same was true of the results of liver function tests. Approximately 60% of patients showed some biochemical abnormality. Three main gold salts were used in Australia, each containing approximately 50% of gold—"Myocrisin" (sodium aurothiomalate), "Aurocalcium" (calcium aurothiomalate) and "Solganol" (gold thioglucose). All were given by intramuscular injection. "Solganol" was generally administered as an oily compound, whilst the other two were aqueous. Gold was valueless unless organically combined with sulphur. In general gold therapy produced a great improvement in the periarticular variety of the disease; the vasoconstrictive phenomena might be resistant. Gold could be employed when the erythrocyte sedimentation rate was much raised or almost normal. It should not be used as a last hope, but it should be employed if other methods were unsuccessful. It would not bring about regeneration of badly eroded or destroyed articular cartilage. Contraindications included dermatitis, severe diabetes, nephritis, hepatic insufficiency, blood dyscrasias, hæmorrhagic tendencies *et cetera*. Small dosage and maintenance therapy were definite advances in modern chrysotherapy, as they minimized toxic reactions and diminished the incidence of relapses. Gold was slowly eliminated and remained in the plasma for many months according to the dosage. It was thought to act by combining with the SH radicals. It was concentrated in the liver and kidneys more than in any other organs. Sodium aurothiomalate increased the bacteriostatic power of the serum against the *Streptococcus viridans*. Gold was excreted in the urine. Dr. Parr said that toxic reactions mostly affected the skin; the order of frequency was dermatitis, stomatitis and renal toxic reactions. Serious complications affected the hæmatopoietic system, but jaundice and exfoliative dermatitis were in the same category. The percentage of complications had declined under the small dosage method now commonly employed. Toxicity was more or less equal with all available compounds, but there was some suggestion that the calcium salt would prove to be the least toxic. In the treatment of complications stoppage of therapy was vital; BAL, blood transfusions and penicillin might be used. Relapses were common with the

older method of treatment by successive courses; failure of chrysotherapy was common in relapses. The best preventive of relapses was maintenance dosage until the erythrocyte sedimentation rate was normal and symptoms of activity, systemic or local, had disappeared. Most authorities considered that cure was obtained in about 10% of cases and improvement in 75%. The results were approximately the same irrespective of the preparation employed. Accessory measures included physical therapy, orthopædic measures, blood transfusion, and the exhibition of calcium, insulin and glucose. Sulphonamides might be used before gold was given, and both might be used concurrently. In conclusion, Dr. Parr said that gold therapy in low dosage and with a maintenance dosage over longer periods was a valuable therapeutic tool in rheumatoid arthritis.

L. T. WEDLICK (Melbourne) said that Dr. Parr's work was well known, and he agreed that the use of gold was dangerous, the maximum dose permissible being 25 to 50 milligrammes. It was important to ensure that no anæmia was present before any gold was given. Since BAL had become available it was much safer to give gold, and that preparation had simplified the treatment of dermatitis due to its use. The Empire Rheumatism Council had stated that two things were useful in the treatment of rheumatoid arthritis, namely physical medicine and gold. Dr. Wedlick considered that it was important to search for foci of infection, including the cervix of the uterus, and that it was essential to maintain a good state of nutrition.

L. J. A. Parr (Sydney), in reply, elaborated his lecture by saying that Lugol's iodine was of use in rheumatoid arthritis only if hyperthyroidism was present, and that although he had known of doses of potassium iodide as large as 90 grains per day being given, he considered that iodine had no real value as a therapeutic measure in rheumatoid arthritis. He always took great care to examine the blood, estimate the erythrocyte sedimentation rate, examine the gastric contents by means of a test meal and determine the plasma protein content of the blood. In severe cases he always gave a blood transfusion before commencing other forms of treatment. He considered that when there was evidence of vasoconstriction it was necessary to give injections of adrenaline as well as glucose and insulin in order to obtain a good result. He considered that the most important thing in gold therapy was to give small doses, but that in some cases the disease progressed despite its use. With him the first line of treatment was always the administration of "Proseptasine" for a prolonged period, and he was using gold less and less. The object of his treatment with "Proseptasine" and gold was to keep the blood "bactericidal".

## Section of Naval, Military and Air Force Medicine and Surgery.<sup>1</sup>

**President:** S. R. Burston, C.B., C.B.E., D.S.O., M.B., B.S., F.R.C.P. (Edinburgh), F.R.C.P. (London), F.R.A.C.P., Victoria.

**Vice-Presidents:** J. Steigrad, C.B.E., E.D., M.B., Ch.M., F.R.A.C.S., New South Wales; J. A. Gollan, M.B., B.S., Western Australia; H. G. Furnell, C.B.E., D.S.O., E.D., M.B., B.S., Dip.G.O., F.R.C.S., Victoria; G. W. Barber, C.B., C.M.G., D.S.O., V.D., M.R.C.S., L.R.C.P., Western Australia.

**Honorary Secretary:** G. B. G. Maitland, C.B.E., D.S.O., D.C.M., E.D., M.B., B.S., Western Australia.

### President's Address.

S. R. BURSTON (Melbourne) delivered his presidential address on the subject of coordination of the medical services in war. He referred to Australia's successful efforts in coordinating and conserving medical manpower and medical supplies in the 1939-1945 war, and suggested that the measures taken should be reviewed to cope with

future emergencies. He considered the measures under three headings: (i) coordination of the civil medical services and between them and the medical services of the fighting forces; (ii) coordination between the medical services of the Navy, Army and Air Force; (iii) conservation of medical manpower within the services. With regard to (i), Major-General Burston discussed the history and scope of the Central Medical Coordination Committee

and the relationship of the State medical coordination committees to the central body. He pointed out that the members of the medical profession had virtually voluntarily subjected themselves to conscription twelve months before any other section of the community. A Director-General of Emergency Medical Services had been appointed, who had been empowered to give directions concerning those services to the State medical coordination committees. A reduction in the time for graduation from medical schools produced in three years the number of graduates who would normally have been available in four. The medical coordination set-up was transferred from the Department of Defence Coordination to the Department of Health. Turning to (ii), Major-General Burston said that a Standing Committee of Services Medical Directors had been established in 1940; its functions were advisory and consultative, to advise the Minister of Defence Coordination on matters affecting the medical services of the Navy, Army and Air Force, and in general to bring to his notice any matter of which it considered that he should be informed. When necessary, medical officers of the Allied forces were coopted. The committee met at least once a month. Its activities covered every interest of the medical departments of the services, including on occasion the detaching of service medical officers to relieve civilian medical practitioners. It undertook the coordination and control of measures for the prevention of venereal disease throughout Australia, and the coordination of medical arrangements for demobilization of the forces. With regard to (iii), Major-General Burston said that early in 1942 it had become apparent that the medical manpower of the country would not be sufficient to fulfil the demands of the services without unduly depleting the number of civilian medical practitioners. Measures were taken in the Army by which the establishment was immediately reduced by over 200, and the Army also gradually became self-supporting in specialists and medical technicians. Major-General Burston then set out some of the faults in the measures taken to coordinate and control medical manpower; for example: (i) failure of the Central Medical Coordination Committee to function until some months after the declaration of war, (ii) failure of the Government to grant the committee the authority necessary to its task. He urged the rectification of those and other faults before another emergency occurred, and paid a tribute to the loyal cooperation of the medical profession. He urged also (1) the appointment by the Commonwealth Government of an expert committee to examine the present set-up and make recommendations for the future, (ii) determination of the maximum degree of coordination possible between the services, (iii) the necessity for a common standard of medical fitness for medical officers of the three services, and (iv) the necessity for evolving some system of pooling the medical resources of the three services during demobilization in order to prevent unfairness.

#### Army Catering.

C. STANTON HICKS (Adelaide) read a paper entitled "Army Catering, the Fundamental Basis of National War-time Strategy and Fighting Efficiency". He said that the feeding of the soldier, originally based upon foraging, developed after the Napoleonic Wars, the Spanish-American War and the Boer War into a unit system dependent upon organized supply services. Scientific principles were first applied by Rübner and Voit to the new German conscript army. Under the direction of the Medical Advisory Committee of the Army Council, British Army field trials were held in 1909 and 1910; the report showed that an increase of 800 Calories on the energy value of the 1909 army ration was necessary if fatigue and loss of weight were to be prevented. The 1914-1918 war had demonstrated failure to apply the results; the spectre of food wastage led to the introduction of expert catering advisers from the trade to advise on feeding management in the large camps and establishments in England. The influence of the 1914-1918 war on army feeding was different in the United Kingdom from that in the United States of America, where newer nutritional principles were applied to procurement and supply. Australia followed the United Kingdom in 1939 by calling in catering advisers, whose efforts were to be directed mainly towards making army feeding attractive. The speaker then discussed the problems of feeding large populations, civilian and service, under conditions of total war, and referred to sources of error which had enormous aggregate effects on shipping *et cetera*. He pointed out the particular difficulty in securing the intake of adequate food factors *et cetera* in the army, where feeding was regimented. He condemned the method of providing canteen and other sources of supplementary feeding on scientific and tactical grounds, as well as on those of national strategy, which rested upon security of food supply. He dealt at some length with the influence of waste. Referring to the object of army feeding and its achievement, Sir Stanton Hicks mentioned the part played by supply and procurement, including processing, packaging and the complex problems involved. He then discussed the use of dehydrated butter fat, whole grain cereal and bread, dehydrated vegetables and germinated legumes, special rations for special purposes and the uses and misuses of dehydrated egg and butter. With regard to unit feeding, he said the personnel and equipment should be designed for the task and place, and referred to the need for the close cooperation of the general staff. He stressed the importance of the cook and caterer as the only controllers of the unit end of the pipeline of supply, and the relationship of the catering corps to the unit command and the quartermaster-general. Finally he said that the feeding of the soldier was the basis for human efficiency and tactical success, since it increased striking and staying power and manoeuvrability, whilst by conserving foodstuffs and manpower it was the basis of national strategy in time of war.

### Section of Neurology and Psychiatry.<sup>1</sup>

President: L. B. Cox, M.D., M.R.C.P., F.R.A.C.P., Victoria.

Vice-Presidents: W. S. Dawson, M.A., M.D., F.R.C.P., D.P.M., F.R.A.C.P., New South Wales; F. H. Beare, C.B.E., E.D., M.D., B.S., F.R.A.C.P., M.R.C.P., D.P.M., South Australia; C. R. D. Brothers, M.D., M.R.A.C.P., Tasmania; J. Bentley, M.C., M.B., Ch.B., Western Australia.

Honorary Secretary: G. C. Moss, M.B., M.R.C.P., F.R.A.C.P., Western Australia.

#### President's Address.

L. B. Cox (Melbourne) for his presidential address took the subject of medical sequelæ of brain injury. He said that injury to the head produced its effects by the force of the injury, its direction, its position and the area to

which it was applied; other significant factors were whether the head remained fixed despite the blow or whether it was suddenly moved or conversely stopped in its movement by the impact. The various types of injury could be divided into three categories: (i) injuries of the deeper structures of the hemispheres, (ii) injuries of the cortex, and (iii) injuries of the brain stem. Dr. Cox discussed the various types of injury, with particular

<sup>1</sup>The meetings of the Section of Neurology and Psychiatry with the Section of Ophthalmology and the Section of Medicine have already been recorded.



reference to the pathological background of the late effects associated with them, and quoted several illustrative cases. He said that the final state seemed to depend on at least four factors: (i) the extent and position of the damage, (ii) the presence of foci of abnormal brain activity, (iii) the pre-traumatic personality of the patient, and (iv) external social factors—for example, compensation, litigation *et cetera*. He then stated the following conclusions. (i) Reasonably effective intelligence might be retained after head injury, even though air encephalography revealed considerable loss of white matter. Therefore the complaints of persons so affected should not be lightly dismissed as functional or trivial. (ii) When the change in the white matter was great some degree of dementia was likely. (iii) In some cases white matter was spared while the cortex suffered predominantly. (iv) Post-traumatic epilepsy, although associated with scarring, could arise without any adhesion of scar to dura. It was almost certain that the symptoms of concussion were related to brain-stem injury. That observation probably applied as well to the loss of consciousness, delirium and confusion. It was suggested that certain post-traumatic psychoses might arise from such lesions. (v) The personality trends of the patient might determine the type of neurosis or psychosis arising after brain trauma. (vi) Late effects such as *status epilepticus* might arise, not only from abnormal discharges associated with brain scarring, but from such changes in the blood vessels in those scars, with thromboses, softening and oedema.

#### Disorders of the Basal Ganglia.

K. B. NOAD (Sydney) read a paper on the subject of some disorders of the basal ganglia, in which he referred to an unusual case of carbon monoxide poisoning and discussed in detail the anatomy and physiology of the basal ganglia, with particular reference to histological considerations and the blood supply. He said that the vulnerability of the basal ganglia to damage by anoxia, by some metabolic disorders and by toxic conditions generally was indicated by their frequent involvement in such processes; that selectivity had not yet been satisfactorily explained. Referring to pathology, Dr. Noad said that there were several disease entities whose common denominator was the syndrome to which James Parkinson's name was attached. The outstanding feature of the pathology of Parkinson's syndrome was that no characteristic pathological substrate existed. One constant feature appeared to be that the changes were produced by damage to the vessels of the region with subsequent cellular atrophy, areas of softening, focal increase of glia and fibrosis of the meninges. Another significant common fact was the integrity of the motor cortex and pyramidal tracts. With regard to progressive lenticular degeneration, Dr. Noad said that the present view of its pathogenesis was that it was primarily a liver disease, with secondary involvement of the putamina. The same affinity was seen in kernicterus, and the two conditions illustrated again the vulnerability of the striatum to toxic action. The familial nature of the condition was related by some authorities to disease of the liver and not to disease of the nervous system. In Huntington's chorea the most dominant of all the heredo-familial diseases of the nervous system, pathological changes in the neuraxis were remarkably constant. Generalized atrophy of the brain was present, but shrinkage was most pronounced in the frontal and precentral cortex, with the development of secondary hydrocephalus. In the basal ganglia the neostriatum was most affected by cellular degeneration and glial proliferation, characteristic of the disease in that region. The *globus pallidus* was less involved. The cerebral changes in that condition were extremely uniform. Turning to athetosis, Dr. Noad said that the pathological basis of the condition was a characteristic lesion of the striatum, in which the grey matter of the nucleus was broken up by white fibres. The consistency of the ganglia remained unaltered. Alexander's theory of the disorder appeared to fit the facts better than the postulation of a toxic reaction in the cells of the striatum or any other theory; his view was that the disease resulted from a prenatal develop-

mental defect affecting the fronto-pontine tract. Hemiballismus, a disturbance of synergic posture and movement upon the opposite side of the body, was due to a lesion damaging the subthalamic body alone. The morbid changes in the body were usually of vascular origin despite its good blood supply. In poisoning by carbon monoxide or by nitrous oxide, the lenticular nucleus, particularly the *globus pallidus*, was the most severely damaged area in the brain. The cortex and other basal nuclei were less affected. Similar changes also followed poisoning by barbiturates and such substances as manganese. The amount of damage in the brain after gaseous poisons was always greater when the survival period was prolonged; the onset of the Parkinson syndrome was usually delayed for years. Calcification in the basal ganglia had been frequently reported in patients who had died of *encephalitis lethargica*. The *globus pallidus*, commonly its anterior part, was the site of election for the calcium deposit. The known facts suggested that a vascular factor was the one most likely to originate the precipitate. Calcium deposits were found after carbon monoxide poisoning, in arteriosclerosis, in degenerative conditions such as Huntington's chorea, in mental deficiency and in chronic alcoholism. The sequence of events seemed to be that tissue necrosis freed lipid, which, breaking down, liberated phosphoric acid; that combined with the calcium of the blood, which might be in excess in some of the conditions mentioned, and resulted in calcification.

L. B. COX (Melbourne) showed some slides of two rare conditions affecting the basal ganglia. The first slide was from a young girl, who had developed extreme rigidity with spastic speech and had ultimately died. At autopsy the pigmentary disturbance characteristic of the Hallervorden-Spatz syndrome had been found in the *globus pallidus*. That area, shown in the second slide, had been infiltrated by greenish-golden pigment giving the striking appearance found only in that condition. The second case mentioned by Dr. Cox was one of syringo-encephalia involving the basal ganglia. That was remarkable, in that the pyramidal tract was comparatively normal; it had thus grown down through the glial tissue, which must have preceded it in the development of the brain.

#### Human Toxoplasmosis.

A. R. EDMONDS (Perth) discussed human toxoplasmosis and reported a case. He said that human toxoplasmosis was a rare disease, widespread throughout the world, affecting the *fetus in utero*, adults and children. The parasite was a protozoan with a simple life cycle; it infested a large variety of mammals and occurred also in birds. It was apparently an intracellular parasite and had a wide range, but grew only in fixed tissue cells. It was rather delicate and needed special conditions for survival outside the body. Referring to pathology, Dr. Edmonds said that three chief factors seemed to be at work: (i) spread through the blood stream, whatever the route of infection; (ii) a specific granuloma, generally associated with an involved blood vessel; (iii) actual toxin production. Recovery resulted in some immunity of undetermined duration. Neither the source of the organism nor the route of infection in man was known; an animal reservoir and an insect vector were suspected. Sabin had listed six types of infection in man: (i) "hydrocephalus" *in utero*—an encephalomyelitis in the fetus resulting in stillbirth; (ii) encephalomyelitis in the newborn, or congenital toxoplasmosis, death occurring a few days or weeks after birth; (iii) congenital infection, in which the child survived, showing in infancy or early childhood four signs: (a) internal hydrocephalus, (b) cerebral calcification, (c) chorioretinitis, and (d) clinical signs of cerebral damage; (iv) acquired infection in early childhood, manifesting itself as atypical encephalitis and resulting in death or recovery, with or without permanent damage to the central nervous system; (v) an acute fever in adults, associated with a skin rash and atypical pneumonia, which might result in death or recovery; (vi) non-apparent infection, demonstrable only by the presence of antibody or by the production of an infant infected *in utero*. Referring to diagnosis, Dr. Edmonds said that absolute

diagnosis could be made only by the cultivation of the organism in a number of laboratory animals by inoculation of material from the patient. A presumptive diagnosis could be made (i) by the demonstration of the presence of specific neutralizing antibody, (ii) in the presence of a typical clinical picture and microscopic demonstration of the organism, and (iii) in the presence of the tetrad of signs listed in Sabin's fourth type. Dr. Edmonds then reported the case of a female patient, aged fifty days, who had died, and outlined the post-mortem findings.

AILEEN M. MURPHY (Perth) asked whether a neutralization test for toxoplasma had been carried out upon the mother of the child. A. R. Edmonds (Perth) replied that no virulent cultures of toxoplasma were available in Australia for carrying out the test. A negative result would not necessarily be significant, as antibodies might disappear from the serum fairly readily, although they might persist in some animals.

J. BENTLEY (Perth) asked Dr. Edmonds whether the mother had had any symptoms and, secondly, whether any form of treatment was of avail in the condition. A. R. Edmonds replied that the mother had had no symptoms and appeared to be quite well. Sulphonamides, particularly sulphapyridine, acted on the organisms *in vitro* and also in animals. They were useful in the milder types of the disease in adults, but in some of the severe forms occurring in childhood they were not effective.

J. A. MCCLUSKIE (Perth) referred to the interchangeability of some infections and to Hindle's work on the production of encephalitis from yellow fever and *vice versa*. That fact should be remembered in connexion with a disease like toxoplasma. The photographs of the brain which Dr. Edmonds had shown revealed a condition resembling the lesions found in the brains of voles which Dr. McCluskie had seen while investigating the cause of vole death.

A. R. Edmonds (Perth), in reply, said that he was aware of the interchangeability of infections. Not many years earlier bacilli had been said to be responsible for measles and influenza, so he agreed that some bacillus in some phase of its development might be responsible for toxoplasmosis. He thought that the vole was actually one of the animals which might be naturally infected by toxoplasma. Wolf, Cowen and Paige had worked out the animal reservoir. Some of the brain changes seen might not be infective, but allergic, in origin. Burnet had shown that phenomenon in monkeys infected a second time by poliomyelitis.

#### Child Psychiatry.

JOHN F. WILLIAMS (Melbourne) discussed the growth of child psychiatry with the increased specialization within the child guidance team—for example, psychologist, psychiatric social worker, play therapist and speech therapist. The varying methods of approach in different clinics were also mentioned. The different types of problem and their aetiology and classification were briefly reviewed, as well as the variations from adult psychiatry. Dr. Williams laid stress on the possibilities of prophylaxis of adult disorders. He maintained that, while all the disorders of conduct, habit and personality should be regarded as of interest to the psychiatrist, who was in some ways best fitted to deal with them, others—for example, psychologists and educationists—were also interested, and their training was in some respects more complete. The psychiatrist should be fitted to lead; but special training and experience with children were required, and others had to be admitted to responsibility for the care and treatment of many of the children requiring special attention. Psychoanalysis of the child seemed to be desirable; but the acceptance with religious fanaticism of the dogma of the training analyst was not to be regarded as a guarantee of scientific objectivity. In conclusion, Dr. Williams emphasized the need for a psychiatric approach to paediatric problems in baby health centres, kindergartens and schools, and for a wider spread of psychiatric knowledge.

J. A. MCCLUSKIE (Perth) said that he had been director of child guidance clinics in Manchester and had seen half

a million children there. As a result of his experiences he found himself in complete agreement with Dr. Williams, particularly in his views on subnormal children. That was a problem for the future. It was impossible in Surrey to get them to provide educational facilities for that group, which was being handled in a cruel fashion. The children were either put with big boys to keep them quiet or were mishandled in other ways. They were mental dwarfs who were put with physical giants. Dr. McCluskie felt that social workers should not carry out therapy, as frequently they committed gross errors. The parents were usually the problem in those cases. With regard to the controversy between Melanie Klein and the Freudian groups, Dr. McCluskie thought that the Freudians provided a certain amount of danger and their doctrines as applied to children were rather repulsive. As to whether a psychiatrist should himself be analysed, Dr. McCluskie said that James Bridie, the well-known author, who was also a doctor, had said that he had never been analysed, and that if he contemplated it the analyst would have to have the wisdom of Christ and the experience of Confucius. Otherwise he did not want to be analysed.

R. A. J. STANTON (Perth) asked Dr. Williams whether he would outline the steps taken to educate parents in the matter of behaviour problems of children.

J. B. HOOG (Perth) said that he was not a psychiatrist, but in listening to speakers' references to physical giants and mental dwarfs among subnormal children, he wondered, as both conditions were unalterable, whether it would not be the best thing to encourage them to make the best of it.

W. WYATT (Perth) said that Dr. Williams had advocated that the psychiatrist should treat the child and the social worker should deal with the parents. He (Dr. Wyatt) would be inclined to turn the arrangement the other way. Many of the problems in childhood were due to maladjustment in the parents, and there was evidence to show that if the parents were put right the child automatically adjusted himself. He had found good results if the psychiatrist treated the mother or parent and the clinical psychologist carried out play therapy or other form of treatment. That allowed the psychiatrist to concentrate on the parents, especially if they showed neurotic tendencies.

J. F. WILLIAMS (Melbourne), in reply to Dr. Stanton's question, said that one thing was of the greatest importance, and that was the benefit which followed the giving to children of a sense of achievement. The dull child was a potentially useful citizen and he would be more useful still if he had a sense of achievement and happiness in his work. Another point was the over-anxiety on the part of parents, which was contagious, and reassurance of the children and the parents was most essential. The child was put in a playground, where he was allowed to work out his emotional difficulties in an interesting way, while the parents' problems were handled by the psychiatrist. If there was a well-developed neurosis or psychoneurosis in the parents, treatment should be carried out somewhere else rather than in the children's psychiatric clinic. Dr. Williams felt that serenity in the home and a sense of achievement by the child went a long way towards solving the problems of childhood.

#### Criminal Responsibility in Incipient Psychosis.

F. M. G. PRENDERGAST (Perth) discussed criminal responsibility in incipient psychosis. He said that in Western Australia the McNaghten rules were qualified in the following way: a person was not criminally responsible if he was in such a state of mental disease or natural mental infirmity as to be deprived of the capacity to control his actions. Thus, for all practical purposes, if a person was accepted as acting under the influence of a psychosis, then he was not regarded as criminally responsible for his actions. With the increasing knowledge of abnormal psychology among jurists, more subjects of early mental abnormality were being referred for assessment of their criminal responsibility. That was a desirable development; but it added to the complexity of the

psychiatrist's task. More frequently he was asked to decide whether a delinquent had reached the stage of a psychosis or whether he must still be classed in the "psychopathic personality" group. Dr. Prendergast said that by that group he intended persons who showed mental abnormality particularly in their emotional reactions, but not sufficiently to be considered psychotic, although psychosis might develop later. He referred to the difficulty of deciding whether a delinquent was really psychotic, and quoted three cases to illustrate his point. He thought that the psychiatrist had to rely largely on his clinical acumen, and that special diagnostic procedures had as yet only a limited application in differentiating a psychopathic personality from an early psychosis. Schizophrenia raised the most difficult problems. Dr. Prendergast put forward the view that it was important for the psychiatrist to study carefully the police depositions in the lower court before his first interview with the prisoner, which was the most crucial interview. He also urged psychiatrists to beware of the "blackout" explanation of some criminal action; he considered that the "blackout" as a defence was the greatest danger confronting psychiatry from the medico-legal angle. It seemed that psychiatrists should have a keener realization of the problem of psychopathic personality *versus* psychosis, in order to press for a more satisfactory solution. At present the subjects had to be sent either to a mental hospital or to a prison; there might be serious objections to both. The best solution seemed to be the establishment of a special section of the prison department, where all prisoners who appeared to need psychiatric investigation or supervision could be placed. The psychiatric supervision provided should be adequate both quantitatively and qualitatively. Enthusiasm was a dangerous substitute for experience in that branch of psychiatry.

J. B. Hogg (Perth) asked what percentage of psychopaths made any real progress with treatment in mental hospitals.

F. M. G. Prendergast (Perth) replied that only a small percentage could be reformed, as arrangements in mental hospitals were not designed for them. They should have a section apart.

P. C. TRESISE (Perth) deprecated the use of the term "blackout".

F. M. G. Prendergast said that the lay public insisted upon using the term. One was almost forced to use it, if only to show the abuses which arose when it was often used as an excuse for any criminal act.

J. H. McCLUSKIE (Perth) described some of the underlying causes of the word "blackout". Some of them were genuine organic conditions.

F. M. G. Prendergast (Perth) agreed; but he emphasized that only in a small percentage of cases in which a "blackout" was the excuse given for an offence was a really genuine cause operating.

#### The Surgery of Pain.

A. E. COATES (Melbourne) read a paper on the surgery of pain. He said that pain was the main reason for surgical intervention in many disease processes. Referring to anginal pain and the pain due to vascular diseases of the extremities, he said that ischaemia of the affected organ was the common feature of the diseases concerned. Surgical treatment aimed at removing the vasoconstriction, (a) by interrupting sympathetic efferents, (b) by excising the clot or segment of artery containing it, and (c) by interrupting nerves carrying sensory impulses from pain-producing lesions. Injection of alcohol into or around the left stellate ganglion would relieve anginal attacks; but removal of the left stellate ganglion was more effective and less apt to produce brachial neuritis. Raynaud's disease in young women was best treated medically; in older women, especially if rheumatoid changes in the hands or scleroderma of the hands and face were present, cervical sympathectomy was of value. In organic occlusive arterial disease of the legs the pain was of two types: (a) claudication and (b) rest pain and the pain of ulcers, infected nails *et cetera*. Ischaemia produced deep indefinite

but unbearable pain; one needed to beware of pain in a limb encased in plaster of Paris. In Buerger's disease conservative measures might give sufficient relief; but if pain persisted and other signs were present, lumbar sympathectomy might be considered. In the catastrophic type of condition due to a saddle-shaped clot at the popliteal artery bifurcation the pain was the feature to note in differentiation from venous thrombosis. If spreading gangrene of the toes was present, amputation below the knee was necessary. However, a new method was promising—excision of the blocked artery up to the end of the clot, ligation of the artery at the point of pulsation and section of the main veins. Spasm of the collaterals was overcome at once and lumbar sympathectomy produced its maximum effect. "Dicumarol" and heparin were helpful. Ice packing might be of value. The intolerable pain of ulceration and indolent sores on the toes was best relieved by nerve section. The pain of pelvic malignant disease was amenable to surgical treatment. Two procedures were possible, chordotomy and alcohol injection of the spinal theca. The former was a severe operation and might need to be performed on both sides; the latter was easy and carried no more risk of paralysis. With regard to pain in the upper extremity, the speaker said that the *scalenus anticus* syndrome was well known. Intrathecal or foraminal compression was associated with pain on coughing or straining. The cause should be sought for and removed. Median nerve compression at the wrist was a cause of pain in the hand. Five well-defined types of pain in the head were referred to the surgeon: (i) pain due to local organic lesions; (ii) pain referred to the head from some disease in the vicinity; (iii) pain of periodic nature, such as migrainous and ciliary neuralgia; (iv) facial neuralgia of dubious origin; (v) paroxysmal neuralgia—*tic douloureux*. Treatment of the first two groups was the treatment of the cause. The treatment of post-herpetic neuralgia was not satisfactory. Nerve section and alcohol injection of the Gasserian ganglion often relieved the pain of radioneurotic ulcers of the tongue and mouth. Alcohol injection of the Gasserian ganglion and X-ray therapy to the ovaries had produced relief of migrainous neuralgia. Facial neuralgia of dubious origin often responded to general measures rather than to local treatment. Supra-orbital neuralgia might present a difficult problem. The diagnosis of true trigeminal neuralgia was easy and the treatment was well defined, but careful neurological examination and general assessment of the patient were still important. Alcohol injections given locally at the appropriate foramen produced temporary relief. For elderly patients intracranial ganglionic injection was relatively safe and provided sufficiently lasting effects to warrant its trial. For younger patients fractional nerve section was ideal, after extracranial injection had ceased to have effect. If injection failed, complete posterior nerve root section was satisfactory treatment.

G. C. Moss (Perth) said that he could not cover all points in Dr. Coates's paper, but he wondered what Dr. Coates's experience had been in the treatment of causalgia with "Etamon" and what place it would occupy. Dr. Moss had been feeling his way with it. He cited the case of a patient who had been subjected to section of the sympathetic without success and had had most relief of all from the intravenous administration of "Etamon". Dr. Moss cited another case of causalgia in the leg, which had existed since the Alamein campaign, and which had been relieved by paravertebral block; that patient, he thought, would be relieved by "Etamon". Both patients were stable types of person. Dr. Moss also cited the case of a patient with pain in the face, who had shown Horner's syndrome. He had thought that it was due to aneurysm, but the arteriogram had given a "negative" result and he had been at a loss to explain the condition. He had asked Professor Walsh's opinion; Professor Walsh considered the condition to be the paratrigeminal syndrome of Rader. Several similar cases had been encountered at the Johns Hopkins Hospital. Dr. Tresise had mentioned cases of constant headache, commonly called the "chronic headache habit", which had been relieved by the injection of "Novocain" into a tender spot in the occipital region.



Dr. Moss had found this to be an important cause of chronic headache. The condition was really a form of rheumatism of the scalp. Many patients whom he had relieved in that manner had been subjected to encephalographic and other investigations and all the results had proved "negative". In cases of supraorbital neuralgia he had been looking for similar tender areas and had found the tender spot over the temporal artery. That also had responded to the injection of "Novocain". Dr. Moss regarded that as a very real cause of supraorbital neuralgia. Pain in the finger of almost suicidal intensity had been relieved by excision of a small angioneuroma. It was important to consider the surface structures in the problem of severe pain.

MICHAEL KELLY (Melbourne) related some experiences of causalgia, seven in number; two were related to the sciatic and five to the median nerve. The results of injection had been good in three instances, no effect had occurred in two, and the result was uncertain in two. It was an extraordinary thing that section of the sympathetic relieved pain, because afferent fibres ran in those pathways; but, as Dr. Coates had pointed out, afferent somatic impulses were carried by the sympathetic, and those facts had been confirmed by recent work. Livingston and de Takats had done much work in causalgia, and advised caution in operations on the sympathetic; but others at the same American Medical Association meeting were advising wider operation. Benefit accrued probably by reduction in the total number of afferent stimuli going into the neuronal pool which were translated as pain. Dr. Kelly said that it was necessary to ask the patient questions about his symptoms, as a complaint of pain and tingling in the fingers might in fact mean pain in the forearm associated with cramp. It was a common finding that the pain mechanism differed from the ordinary cutaneous sensory mechanism.

J. F. WILLIAMS (Melbourne) was interested that Dr. Coates had mentioned a case of pain of psychic origin which had been cured by explanation. He said that he had often seen pain associated with a psycho-pathological background which had never been explored. He cited a case of pain in the face, of which a woman had complained after being struck by her loving husband, that being the first rift in the lute. He would plead for more attention to such factors.

R. A. J. STANTON (Perth) discussed pain in the neck and its many causes. He said that of course there were Freudian concepts; but he would suggest a simpler one. The holding of the head in the alert position would give rise to pain and aching, and he felt that emotional factors were most important in the production of pains of that nature.

L. B. COX (Melbourne) spoke of facial neuralgia. He said that section of the trigeminal nerve always relieved the true tic. Post-herpetic neuralgia was not relieved and atypical neuralgia of the Sluder type was rarely relieved. It was difficult to judge the atypical cases and he had relied mostly on the injection of a little saline solution into the region, with reassurance.

A. E. COATES (Melbourne), in reply, said that he had tried the use of "Etamon" but was unable to say what his final opinion was, although he felt that it might be of value, as it was a vasodilator. The local use of "Novocain" often gave good results. Leriche had talked about stripping arteries, but that had been largely given up. The local use of "Novocain" was often helpful, both in the occipital area and in the supraspinous area for pain in the shoulder. One speaker had mentioned the cure of pain in the finger by removal of a tumour. That was the well-known glomus tumour. Dr. Coates quite agreed with Dr. Williams about the psychopathic route of approach and its importance. He thought that osteopaths achieved much of their success in that manner.

#### Present Trends in Psychotherapy.

W. WYATT (Perth) read a paper on present trends in psychotherapy. He said that in psychotherapy efforts were being made to overcome certain known defects and limita-

tions and to meet criticisms of theory and method. Referring first to the confused state of psychopathology, Dr. Wyatt said that opposition to analysis was due as much to the volume and complexity of theoretical assumptions as to any over-emphasis on sexuality. Some trends showed an effort to bring theory into closer association with practical problems by stating hypotheses in terms which were familiar to the ordinary person. Karen Horney's modifications of Freudian psychopathology illustrated a simpler hypothesis as the basis of a practical technique. Dr. Wyatt then mentioned the protracted nature of psychoanalytical technique. He said that the high incidence of psychogenic disorders, the relative shortage of trained therapists and the time and cost involved in orthodox analysis made a shorter technique imperative if practical needs were to be met. Group therapy was an early attempt to provide abbreviated treatment. With regard to the inflexibility of psychotherapeutic technique, Dr. Wyatt said that certain patients were unsuitable for deep analysis. The patient must fit the technique in analysis. A flexible technique adaptable to the patient appeared to be more logical. The work of Alexander and French illustrated their "supportive" and "uncovering" techniques. Rogers's "non-directive" therapy was also an example of a modified and shorter form of therapy. Contrasting psychotherapy and physical methods, Dr. Wyatt said that physical methods of treatment frequently achieved dramatic results in spite of having little theoretical basis. In many cases they should be followed up by psychotherapeutic adjustment; but neglect in that respect was too frequent, especially in mental hospital cases. Closer cooperation between the two forms of therapy was advocated. Dr. Wyatt went on to say that the trends in psychotherapy which had developed from consideration of those unsatisfactory features had certain factors in common. The study of the individual in relation to the group, the problems of human relationships and the influence of environmental factors on the development of personality were shown to be involved in all the modified techniques quoted. It was therefore suggested that social orientation in psychiatry offered a most fruitful field for the coordination of all forms of psychiatric treatment, and an opportunity for a closer relation to social medicine. The ultimate result would be the establishment of an efficient and comprehensive service for mental health and hygiene, with representation of mental hospitals, psychiatric clinics, child guidance organizations, public health bodies, social medicine, schools and universities, magistrates' courts and all branches of social welfare. Thus psychiatry, by furthering the present trends in treatment, might become a pioneer service, in which the pessimism of the past might give place to the idealism of the future.

J. F. WILLIAMS (Melbourne) wondered how Rogers would cope with the whole problem adequately with his method, in view of the complex factors involved.

W. WYATT (Perth) said that the method had been used for minor problems of everyday life, but he had had no personal experience of the method.

P. C. TRESISE (Perth) wanted to hear emotions defined. He thought that much integration with other aspects was required to arrive at what was really meant when the term was used.

J. A. McCLUSKIE (Perth) mentioned the James-Lange and McDougall theories and how Cutler had identified emotions with instincts. He agreed that the psychiatrist needed to have a clear idea of what he meant by the term. Methods varying from shock treatment to the available technique had to be adapted to the individual. Shock methods applied to paranoid types were likely to be disastrous. Dr. McCluskie thought that Rogers's theories were not based on any original foundation. Rogers's ideas were not original and he had borrowed freely.

W. WYATT (Perth), in reply, found it hard to give a clear definition of emotions and mentioned several which had been offered.

P. C. Tresise (Perth) defined an emotion as anything which moved. That was trite. Things moved man.

Motion went on incessantly. The realms of theology were entered. Movement was energy. Primordial energy was really emotion.

L. B. COX read a paper on the treatment of neurosyphilis, in which he presented an analysis of 60 cases of neurosyphilis treated over many years. He described the plan of treatment used at his clinic before the penicillin era, emphasizing at the outset the fact that each patient presented a unique problem in which clinical, psychological and social factors all called for the modification of any set plan by common sense and circumstances. The usual plan of treatment consisted of the oral administration of potassium iodine and perchloride of mercury for from one to two weeks, eight weekly intravenous injections (one of one gramme, one of two grammes, and six of three grammes) of pentavalent arsenic (usually tryparsamide), and twelve weekly intramuscular injections of a bismuth preparation (usually "Bismol"), mercury usually being omitted. At the end of the course the Wassermann test was carried out on the blood and the course repeated. At the end of the second course the cerebro-spinal fluid was again tested. Courses were further repeated as necessary. Modifications sometimes found necessary included the substitution of pentavalent acetyl-arsan for tryparsamide in children and in some adults with small veins; the use of trivalent arsenic when visual changes had occurred with the pentavalent form; transfer of the patient to a mental hospital for malaria treatment when the mental state made this necessary or when a patient with mental disturbance had not responded to one course of tryparsamide; the early use of penicillin in all cases of treatment commenced since it had been available, in other cases in which clinical response had not been satisfactory or in which the Wassermann reaction had persisted, and particularly in cases of optic atrophy or when pentavalent arsenic had affected vision. After analysing the results in his series of 60 consecutive cases of neurosyphilis, Dr. Cox drew attention to certain findings. Treatment by means of tryparsamide or malaria was effective in about 50% of cases of general paralysis of the insane. In the majority of cases of *tabes dorsalis* symptomatic benefit was obtained from tryparsamide therapy combined with bismuth; even if such benefit was not obtained, the pathological process might be arrested. In the majority of cases of meningo-vascular syphilis there was a favourable response to either trivalent or pentavalent arsenic. Chronic pachymeningitis with Charcot's joint or with Erb's paraplegia was resistant to treatment with metallic drugs. Dr. Cox referred to the unquestionable value of penicillin in the treatment of general paralysis of the insane and other forms of neurosyphilis, but it had been used too infrequently in the series analysed for the results to be significant.

F. M. G. PRENDERGAST (Perth) said that he was interested in the subject because he had carried out the malaria treatment of general paralysis of the insane at Mont Park. The results were reasonably satisfactory, but he felt that he would like to see treatment begun earlier. Moore and Stokes, of America, had said that treatment should begin in the early stages by insistence upon examination of the cerebro-spinal fluid of every patient with syphilis. Failure to do that was negligence. That was where the treatment must begin. The difficulty in venereal disease clinics was that if cerebro-spinal fluid examinations were made as a routine measure patients might be frightened away; but patients should not leave the clinic without a record of the cerebro-spinal fluid at the time of discharge. He had known patients to leave the clinic with a negative response to the Wassermann test of the blood and to return with cells and paretic curves on examination of the cerebro-spinal fluid. That was the red flag of neurosyphilis. Dr. Prendergast had done some work which indicated that neurosyphilis was not so much due to a neurotropic virus, but had a tendency to be familial. If one had a patient with general paralysis of the insane and any relative gave a positive response to the Wassermann test, particular attention should be given to that person's cerebro-spinal fluid, as he or she would be a potential candidate for neurosyphilis.

J. BENTLEY (Perth) drew attention to some original work with malaria carried out years earlier at Claremont. All troops had had "T.A.B." inoculation and it was found that when they were given malaria the response to the Widal test became strongly positive. That had then been checked in order to determine whether or not it was due to malaria. So "Sulfosin" pyrexia was induced and it was found that the response to the Widal test did not become positive with "Sulfosin". They therefore concluded that it was not the pyrexia, but the infection itself, which was of benefit in the treatment.

FRANK WALSH (United States of America) said that he had seen cases of neurosyphilis which concerned the eye only, and his experience was weighted in that direction. He was amazed that more trouble had not been experienced with the use of tryparsamide. It had always seemed to him that there was a doubt whether the harm from tryparsamide might not outweigh its value in comparison with other arsenical drugs. When tryparsamide was introduced reports of blindness began to appear. Some had said that that contraindicated the use of the drug in blindness, but others had said that if tryparsamide was useful in syphilis, then it should be used in optic atrophy. That point had never been settled. At the Johns Hopkins Hospital they used penicillin and malaria, and the results had been good. They had never been short of penicillin and that was their routine treatment. Professor Walsh believed that in *tabes* treatment was not so completely effective as in general paralysis, but in the United States they thought that tabetics should have both penicillin and malaria. The figures for penicillin doses had become astronomical as time had gone on. Their syphilitic population was tremendous and there was much congenital disease. They believed that the ideal treatment for interstitial keratitis was penicillin and malaria. They had in some cases had unbelievable success. He had seen a good many disasters with tryparsamide in the production of amblyopia. It was necessary that the patient should be carefully watched for optic nerve signs. He knew of one patient who had large amounts of tryparsamide without ill effects, but treatment had been temporarily suspended for some reason, and then after resumption the third dose of tryparsamide had been followed by severe constriction of the visual field, from which the patient had never recovered.

P. C. TRESISE (Perth) said that he had been interested in the problem of congenital syphilis in England, and his conclusion was that the nearer the mother's infection was to full term, the more likely was the infection in the child to be severe. The course of events was usually infection of mother and pregnancy followed by stillbirth. The next pregnancy would be likely to be followed by the development of congenital general paralysis in the child. If there was another pregnancy, congenital *tabes* might develop late—at about the age of sixteen years. And so the further from the infection from the mother, the later did the congenital lesions appear in the child. Another question was that of "burnt-out" syphilis, in which the disease seemed to have run its course and the patient became serologically "negative". That was found in elderly men, and Dr. Tresise wondered what percentage of infection had that termination.

W. L. CALOV (Sydney) asked Dr. Cox if he had found penicillin in oil suitable for treatment or if only the soluble form had been used. He also asked what Dr. Cox meant by the term "well".

J. H. McCLUSKIE (Perth) said that he must agree that his experience with arsenic in general paralysis was the same as that of Professor Walsh. It was curious that some patients did well with arsenic and some did very badly, developing optic neuritis suddenly. Another point was that it was a pity that no one had carried out an early investigation of neurosyphilis in cases of general paralysis, congenital syphilis and advanced neurosyphilis. He put in a plea for some sort of research into that subject.

J. F. WILLIAMS (Melbourne) asked Professor Walsh if the Americans preferred malarial to other forms of pyrexia.

Frank Walsh (United States of America) replied that malarial pyrexia was preferred to any form of artificial heat treatment.

L. B. Cox (Melbourne), in reply, said that examinations of the cerebro-spinal fluid were performed once a year. The clinic at the Alfred Hospital was a sort of club, and patients attended regularly, were very tractable and never objected to a lumbar puncture once a year. Several patients referred from the ordinary syphilitic clinic with no particular neurological signs and "positive" cerebro-spinal fluid had not been included in the series he had discussed. Many of the infections had dated from World War I. The patients had had one course of injections and perhaps some iodine by mouth, and had then been turned loose. Perhaps the blood's response to the Wassermann test had been negative and the treatment had been considered adequate at that time. Many patients had been of that type. With regard to the intrathecal injection of penicillin, he had not used that route, nor had he used penicillin in oil and beeswax. Referring to optic atrophy, Dr. Cox said that each patient under treatment with trypanamide had to be checked by the doctor before each injection and patients were instructed to report immediately any eye symptoms. He could remember only one tragedy, and that was the case of a patient who had gone to another city with a letter from him, had received a long course of trypanamide treatment without a check on his vision, and had become almost blind. Dr. Cox said that his experience of congenital syphilis had been too small to have been of any use. His definition of "well" was "in full work" for a minimum of four years. Kinnier Wilson had had difficulty in deciding whether trypanamide or malaria had been more effective in treatment. Of the two, Dr. Cox thought that Wilson preferred the former. Dr. Cox said that he thought that malaria plus trypanamide was possibly more efficacious than trypanamide alone. Malaria seemed to have something that other forms of treatment had not.

#### Encephalitis and Encephalomyelitis.

GERALD C. Moss (Perth) read a paper on encephalitis and encephalomyelitis. He said that Greenfield in 1947 had classified the conditions into the following five types: (i) virus encephalitis affecting the grey matter primarily or almost exclusively; (ii) encephalitis of both grey and white matter caused by a virus of pantropic type; (iii) post-infectious encephalitis (acute perivascular myeloclasia); (iv) acute haemorrhagic leucoencephalitis; (v) meningo-encephalitis of virus origin. Of the first type the forms were rabies, encephalitis lethargica and sporadic forms of unknown aetiology, poliomyelitis and polioencephalitis of the brain stem and subacute encephalitis with intranuclear type A inclusion bodies (Dawson). Dr. Moss said that it was necessary to know what was meant when the word polioencephalitis was used; bulbar poliomyelitis and brain stem poliomyelitis were preferable terms if infection by the virus of poliomyelitis was meant. Dawson's subacute encephalitis with intranuclear type A inclusion bodies had been reported only rarely; one case was reported in 1943 by Swan, of Adelaide. Dr. Moss wondered whether it was a form of *herpes simplex*. Referring to the second type, the speaker said that the forms were Saint Louis encephalitis, Japanese B encephalitis, eastern, western and Venezuelan forms of equine encephalomyelitis, Russian spring-summer tick-borne encephalitis, herpes and louping-ill virus encephalitis in man, and subacute sclerosing encephalitis. Some of those conditions had caused concern in the United States of America. The existence of still more suspected virus encephalides which might affect man was indicated by the presence of antibodies in human blood. Many types of mosquitoes could act as vectors; and it seemed that species already known to be vectors of western equine and Saint Louis encephalitis could also serve as laboratory vectors of the Japanese B encephalitis virus. Referring to subacute sclerosing encephalitis, Dr. Moss said that it had an uncertain position. Kipping and Downie had recently given a warning that the pathogenic potentialities of *herpes simplex* had perhaps not been sufficiently

appreciated. The first report of Behcet's triple syndrome in Australia appeared to have been made by O'Donnell, of Perth, in 1947; as a result of that it had been possible to recognize another case in the State. The unfortunate patient was still alive. Dr. Moss called for more help from virus research workers. He then mentioned the seven forms of the third type: those following vaccination, variola, measles, influenza, varicella and mumps, and that apparently occurring spontaneously. He said that that was the large group of demyelinating diseases, and discussed in particular the spontaneous varieties, notably *neuromyelitis optica* and Schilder's encephalitis. The student was likely to gain the impression that *neuromyelitis optica* and Schilder's disease were fairly stereotyped in their courses. Uncertainty resulted from any one person's limited experience of the conditions. It seemed that Schilder's disease might vary remarkably in evolution and distribution. The diseases seemed to have a superficial resemblance to multiple sclerosis, but were immediately or potentially more destructive. The fourth type was acute haemorrhagic leucoencephalitis, first described and named by Hurst in 1941; he considered it one of the most acute demyelinating maladies. The fifth type had two forms—lymphocytic choriomeningitis and meningoencephalitis of mumps.

L. WILSON (Melbourne) asked for further information about the circumstances under which members of the Cambridge team working on "sway-back" acquired their infection.

B. GIESINGER (Perth) asked whether sulphonamide drugs or penicillin had any effect upon the conditions under discussion. He recalled seeing many examples of *encephalitis lethargica* in Europe. About 1923 or 1924 he had seen what appeared to be a different type of encephalitis; some of the patients had *herpes labialis*. It was thought that the condition was influenzal in origin. For treatment "Cylotropin" (Schering) was tried intravenously. A number of the patients seemed to obtain benefit. He had reported them in the *Medizinische Klinik*; later others appeared to obtain similar results. Later still he thought that certain patients responded to treatment with "Yatren-Casein". By 1927 that type of case had disappeared.

BRUCE HALL (Sydney), referring to rabies, thought that it might be necessary to consider that diagnosis in the present days of extensive immigration and the influx of people from countries where rabies occurred. He recalled cases of relapsing fever met with amongst the forces in the Middle East. He had recently had a patient with facial paralysis and increased cells and protein in the cerebro-spinal fluid. Such cases were commonly due to relapsing fever in the Middle East. It transpired that the patient was an airman whose duties took him to the Middle East, and he had slept out in an area where the tick vector of relapsing fever occurred. However, search for the spirochæte was unsuccessful. Dr. Hall proposed to repeat the examination should relapse occur.

JOHN WILLIAMS (Melbourne) asked whether it was known when the last case of *encephalitis lethargica* was reported.

G. C. Moss (Perth), in reply, said that he did not know the exact circumstances surrounding the neurological symptoms of the Cambridge workers. In reply to Dr. Giesinger, he said that in the conditions under discussion neither penicillin nor the sulphonamide drugs had been of any use, as the organism concerned was not sensitive. However, some believed that members of the sulphonamide group did have some effect in acute lymphocytic choriomeningitis. Dr. Moss had had no experience of "Cylotropin". He agreed with Dr. Hall that it might become necessary to consider the conditions he had mentioned in a differential diagnosis.

#### Infantile Cerebral Palsy.

CLAUDIA BURTON-BRADLEY (Sydney) discussed infantile cerebral palsy and showed a cinematograph film. She said that infantile cerebral palsy or, loosely, spastic



paralysis, was the term used to designate a group of closely allied, non-progressive crippling conditions in which muscular control was defective. The clinical manifestations might be paresis, hypertonia of some muscles, defective balance, defective coordination, sometimes with hypotonia, or the presence of repetitive involuntary movements or tremor of intention or non-intention type. In Australia about 350 children were affected each year—about 4200 under the age of twelve years. Five boys were affected to every four girls. The condition was chiefly produced by intracranial damage just before or just after birth. A less frequent cause was infection, either through the mother during pregnancy or acquired by the child after birth. The least frequent cause appeared to be an agenic factor with a family history, or possibly a Mendelian recessive inheritance and other agenic stigmata. The history dated from birth; the condition became evident as the various activities dependent on the maturing nervous system did not appear on time or were distorted, and gradually other characteristic defects appeared. The condition fell into five fairly well-defined clinical types: the spastic, athetoid and ataxic types, and the less frequent rigidity and tremor types. Dr. Burton-Bradley discussed these in some detail and referred to the pathological physiology. With regard to treatment, she said that it consisted in obtaining the best response from residual capacities and amounted to building a person; it required to be directed to education and physical independence, including ambulation. Some orthopaedic procedures were useful in the spastic type, but were of little value in the athetoid and ataxic types. Central neurosurgery was valuable in some cases of athetosis. Suitable braces might be useful in all types. Recently antispasmodic drugs had been under trial. An attempt should be made to assess the patient's intelligence before treatment was begun. Much could be achieved by individually prescribed physical therapy, occupational therapy and speech therapy. It should never be forgotten that it was an immature nervous system that had been damaged; treatment should begin at the age of eighteen months if possible. Dr. Burton-Bradley concluded by suggesting the following approach to the problem: (i) early diagnosis; (ii) investigation of intelligence, special senses and aetiology (the last from the point of view of further offspring); (iii) classification according to intelligence; education and treatment for those with an intelligence quotient of 70 or more, treatment and training for those with an intelligence quotient of 70 to 50; for those with an intelligence quotient below 50, consideration of the social and psychological aspects of the family and, if required, direction to a mental hospital.

D. GALBRAITH (Melbourne) said that he was glad to be present and hear a review of the subject and see a film which had been so educational. He had visited the Mosman Spastic Centre and had seen the work there. All had been struck by that example of community effort; it was a sociological experiment of the widest significance. At the Children's Hospital, Melbourne, they had a spastic centre under the enthusiastic guidance of Dr. Jean Macnamara, who was doing particularly good work. The committee of management had said that they would take an active interest in that department in the new hospital, and a half-time medical officer would be appointed who would coordinate the activities of the department. Dr. Galbraith was sure that not much was known about the time factor in the production of the condition. What happened at the time of the birth of the child, such as the length of the labour and all the circumstances surrounding it, should be known. Until that was done and the factual details of each patient were worked out, all knowledge of the subject would not be revealed. With increasing use of neuro-surgery that form of direct approach might provide an answer to the problem of spastic paralysis in the future. The question of mental level was important. On what level were they going to concentrate? It was difficult to treat all with a limited staff, and some compromise might have to be made. Yet in a home the problem was important, as the mother had to deal not only with a physically but also with a mentally sick child. All children

should be helped whose mental level allowed it. Curare and "Myanesin" had been used to reduce spasticity at Frankston, in order to enable the physiotherapist to put the child's limbs through the whole range of movement. They had not had very good results; perhaps sufficient dosage had not been used, as good results had been reported from abroad. Dr. Galbraith said that he would welcome suggestions on the matter.

J. A. MCCLUSKIE (Perth) said that the paper had been really fine. He knew of only one clinic of that kind in Great Britain, and that was at Croydon. He wondered what had been happening to affected children before the establishment of clinics of that character. Speaking as a psychiatrist, he congratulated Dr. Burton-Bradley on the happy look of the children in the film. He was particularly grateful for information on the subject, a subject upon which he had been seeking help for a long time. He advised Dr. Burton-Bradley to advertise her clinic, and so should Melbourne, as he had had a case of that type recently, and neither he nor the mother had known what to do with the child.

P. C. TRESISE (Perth) asked what had been the response to "Tridione".

L. B. COX (Melbourne) said that he was interested in the pathology of the condition. There were diffuse glioses of the cortex and localized areas of gliosis, together with changes in the basal ganglia. He would be interested in the results of treatment with curare. He had used that drug in oil in the treatment of choreo-athetosis and had found it almost ineffective; but he had obtained benefit from the aqueous solution of "Tubocurarine", and would be glad to hear of Dr. Burton-Bradley's experience.

Claudia Burton-Bradley (Sydney) thanked Dr. Galbraith for his remarks. She said that the Mosman clinic provided the possibility for the accumulation of knowledge from the neurological point of view, even if the humanitarian aspect of the work was not considered. She had found great difficulty in obtaining records from obstetric hospitals, and that point needed great improvement. Knowledge of the Rh factor was accumulating, but much was still unknown. But the cerebral complications of kernicterus were known and she should supervise a child suffering from that condition from the age of fifteen months onwards. She was anxious to follow the patients from the obstetric hospital. This might now be possible, as Professor Mayes was interested. Many of the children developed amentia. Dr. Burton-Bradley agreed that surgery might be the answer to the problem of some of the athetoids. She had had help from the orthopaedic angle and would probably obtain more from new antispasmodic drugs. She had made a practice of examining only two children per day, as it was important to assess the capacity of the child to respond and its mental calibre. If those were satisfactory, she took the child into the clinic. There were now 81 children in the clinic and she could bring in only those children who were thought likely to manifest improvement. It was criminal to "dump" such children in an institution when the intellectual level was good. They could be fitted into the community, as some of them could be taught to use electrical typewriters. She felt that those whose intelligence quotient was in the 50 to 70 level should be treated. If the child was very mentally unstable, it should be put in an institution. Hers was an institution to which the children were brought daily, and she had a number of children sorted out into groups. She wished to conduct a scientific experiment at the clinic with the use of various forms of treatment. In reply to Dr. McCluskie, Dr. Burton-Bradley said that affected children formerly developed exaggerated deformity and went into an institution, or became curiosities, or were kept going by the enthusiasm of the mother in taking the child to and from school. The children were happy in the clinic and responded well to ordinary school training. The hemiplegics had a difficult personality and were hard to train, although their physical handicaps were not great. The results with "Tridione" were not good in the treatment of tension athetoids. The children had experienced toxic reactions and vomiting and other side effects. She was now trying "Prostigmin".

### Apparatus for Electro-Convulsant Therapy and Electronarcosis.

L. WILSON (Melbourne) read a paper on recent advances in apparatus used for electro-convulsant therapy and electronarcosis. He said that electro-convulsant therapy was first introduced by Bini and Cerletti in 1937. All the subsequent units were fundamentally similar, delivering a selected voltage for a selected time. All employed a sinusoidal wave form, which resulted in uniform massive bombardment of the cortex until a convulsive seizure occurred. Dr. Wilson then referred to the first attempts to steepen the wave form by argotron valves and to the development of condenser discharge apparatus delivering a steep box-shaped wave with a rapid train decrement. That wave form had several advantages: there was an alternative of monophasic or diphasic discharge, the treatment time per patient was reduced and there was more accurate localization of current with less radiation; dosage was more accurate and the occurrence of convulsions was ensured; from the patient's point of view treatment was more satisfactory and muscle strains were diminished. The apparatus was known as the "MacPhail-Strauss Universal Electropexy Unit" or the "Plexacon". Turning to electronarcosis (electrocoma), Dr. Wilson said that it had really been developed from Leduc's experiments

in 1902. Its aim was to produce by means of electricity a state comparable with insulin coma. He described the technique and the results obtained with the Shotter-Rich and similar apparatus, pointing out some of the difficulties and dangers associated with the use of "raw" alternating current. He said that the treatment was undoubtedly far more dangerous than electro-convulsant therapy, and needed a strong team of doctors; yet, if it was tolerated, the results were most encouraging. At Saint Bartholomew's Hospital, London, a refined current based on the principles of radar was developed; it was to be known as the "MacPhail-Strauss Electroma Unit", or simply the "Pulsacon", and it would not go into production until a sufficient number of patients had been treated and adequately followed up. The success of the apparatus was due to the use of a refined pulsating current variable in voltage, pulse repetition frequency and shortening of the pulse width. By its use the dangers of electronarcosis were banished and, moreover, it provided a probable substitute for leucotomy and a possible substitute for heavy insulin treatment. It was a new form of therapy, giving hope for the most difficult and resistant psychotic problems.

H. K. FRX (Adelaide) asked where Dr. Wilson proposed to carry on his research. Dr. Wilson replied that he was as yet undecided.

## Section of Obstetrics and Gynaecology.

*President:* B. T. Mayes, M.V.O., M.B., B.S., F.R.C.S., F.R.A.C.S., F.R.C.O.G., New South Wales.

*Vice-Presidents:* Roland Beard, M.C., M.B., B.S., F.R.C.S., F.R.A.C.S., F.R.C.O.G., South Australia; W. K. McIntyre, M.C., B.E., M.D., F.R.C.O.G., Tasmania; B. M. Sutherland, O.B.E., M.B., Ch.B., F.R.A.C.S., Victoria; S. E. Craig, M.B., B.S., F.R.A.C.S., Western Australia.

*Honorary Secretary:* R. H. Nattrass, M.B., B.S., M.R.C.O.G., D.G.O., Western Australia.

### President's Address.

B. T. MAYES (Sydney) took as the subject of his presidential address "Childbirth: Design for the Future". He first counselled optimism in spite of international uncertainty, since a new generation could mean a new world. He said that a design for future childbirth should be considered in three sections: (i) the doctor's problems, (ii) the responsibility of the community and (iii) the problem of the mother. With regard to (i), apart from the regular complications of childbirth, there were some of newer discovery or occurrence which would require close observation over the next decade. They were (a) the Rh factor, (b) diabetes and pregnancy and (c) rubella and pregnancy. Referring to (ii), Professor Mayes said that certain facilities were essential to the planning of a maternity service; he proposed to mention two—(a) the provision of an efficient medical school and (b) the provision of adequate hospitals and ancillary services. The future of the universities depended financially on government assistance and on an awakening of the conscience of the community to the needs of a university. Professor Mayes urged the necessity for establishing a medical school in Western Australia, and pointed out the advantages of a small medical school, in which students could be given individual tuition. With regard to the establishment of professorial chairs in the clinical subjects, he said that full-time clinical chairs had been a failure. A design for the future must provide for part-time clinical chairs in medicine, surgery, obstetrics and gynaecology. In the training of medical students both academic and practical instruction was required. Discussing hospitals and ancillary services, Professor Mayes urged the inclusion in the design for the future of four essentials: (a) the provision of more beds for pregnant patients suffering from eclampsia, toxæmia and chronic hypertension; (b) the provision of adequate hospitals for the reception and nursing of premature babies; (c) the establishment of special hospitals for the care and confinement of tuberculous women; (d) the setting up of a blood transfusion

service. Turning to (iii), the speaker said that the mother was the central figure in the design, but a shrinking figure. The decline in the birth rate was the greatest single problem in Australia. The National Health and Medical Research Council had made it the subject of a special report; it had investigated diet in relation to pregnancy, labour and the infant. Since then an investigation had been made into the reasons why people would not have more babies. It was pleasing to see the greatly increased activity of the sterility clinics. In conclusion Professor Mayes said that whilst economic conditions headed the list of reasons for restriction of the family, it had been found that the problem could not be solved by economic remedies alone. Married couples could not be bribed into parenthood. The outlook was grim; but hope was eternal.

J. W. JOHNSTONE (Melbourne) said that in the first half of the present century the factor which had contributed most to the advancement of obstetrics had been the universal and systematic supervision of pregnant women. At the beginning of the century, in 1901, the British pioneer of ante-natal care, J. W. Ballantyne, of Edinburgh, had pleaded the cause of ante-natal supervision and had drawn attention to the lack of knowledge of obstetrical pathology, of hydramnios, of mole, of foetal abnormalities, and particularly of eclampsia. Five years later, in his presidential address to the Edinburgh Obstetrical Society, he was ready to enter into discussion on the great transformation in obstetrics with the future president for the year 1940. Those who had heard Professor Mayes's address were in much the same position—dipping into the future.

Dr. Johnstone then said that from the medical point of view, the three main causes of obstetrical disaster and mortality were sepsis, hæmorrhage and toxæmia. Chemical and antibiotic therapy had radically altered the outlook in sepsis. The causes of hæmorrhage were obvious, but the condition of eclampsia was still the major problem. With regard to the ætiology of eclampsia, the first difficulty was its obscurity. Theories were many, but facts were few,

and nobody had yet held up in the test tube any specific aetiological toxin or decided the organ from which it originated. Eclampsia unfortunately, as in Ballantyne's time, was still the disease of the theories. The basic pathological processes in the disease were three in number: (a) a toxic spoiling going on to various degrees of tissue necrosis in patches or *en masse*; (b) vascular damage with thrombosis, hæmorrhages and infarcts; (c) increase in the extracellular water. There was a growing belief that those processes were in large measure the result of aberrant generalized arteriolar spasm, to which the pathological processes and clinical features were consecutive. However, it was important not to confuse the mechanism, such as vascular spasm or altered water metabolism, with the prime underlying aetiological factor. It was necessary to be satisfied with symptomatic treatment of end results until rational specific treatment could be directed to the prime underlying cause. With regard to treatment, which had to be considered with the limitations mentioned in mind, the following were sound premises. (i) Control of the convulsive seizures was beneficial in reducing damage and mortality. (ii) A generalized arteriolar spasm accounted for much of the damage. In the brain it produced what the physicians would call acute hypertensive encephalopathy. A good way of seeing what was happening inside the brain was to look into the optic cup with an ophthalmoscope. (iii) Alteration in water and electrolyte balance adversely partitioned the water into the extracellular spaces with cerebral oedema and oliguria. (iv) No patient was cured until the placenta was separated from the mother's circulation. Dr. Johnstone went on to say that the routine treatment in Melbourne included the following measures. (i) Symptomatic control of the convulsions was sought by one initial dose of morphine supported by the synergic action of magnesium sulphate. It was given in 50% solution intramuscularly. Ten millilitres were given initially, followed by repeated smaller doses rarely exceeding 20 millilitres or 10 grammes of magnesium sulphate daily. (ii) Elevation of the blood pressure was treated by rest, sedation, depletion, and perhaps venesection. (iii) Tissue oedema and oliguria were treated along simple physiological lines to reverse the abnormal partition of fluid between the blood and cellular spaces and to promote excretion. Excretion was effected with non-electrolytes in the form of 25% glucose solution in 600 millilitres of water, given intravenously and rapidly in twenty to thirty minutes. Sodium chloride in the diet, and especially given intravenously, was harmful; ammonium chloride was beneficial. (iv) The pregnancy was terminated at the earliest convenient time and the best procedure was artificial rupture of the membranes, which was preceded by a short period to effect symptomatic control. If induction was carried out at once, the depressant effect of the magnesium on neuro-muscular action produced a delayed response of the uterus with its attendant disadvantages. The use of Cæsarean section required the support of some special circumstances.

Discussing results, Dr. Johnstone said that at the Women's Hospital, Melbourne, since ultraconservative elimination and the use of sedatives had been discarded, the mortality rate had dropped, first from 15% down to 10%, and more recently, since the introduction of magnesium sulphate three years earlier, from 10% to 4%. The reduction of maternal mortality had not been gained at the expense of fetal mortality, which had dropped from 33% to 16%. The main factors in the improvement were: (a) the use of magnesium sulphate as a depressant; (b) depletion of fluids by the intravenous administration of non-electrolytes with restriction of sodium; (c) early termination of pregnancy, preferably through the natural passages; (d) prophylactic treatment by efficient ante-natal care, with shifting of attention from the albumin in the urine to the earlier rise of blood pressure and the warning increase in weight. More lives were saved by reducing the incidence of eclampsia than by reducing the mortality of the established condition. They might well ask, with Professor Mayes, what was the use of the sphygmomanometer and the scales in clinics if the proportion of ante-natal beds made it impossible to admit the patients to hospital for adequate rest. Dr. Johnstone expected that

the next decade would elucidate the prime aetiological cause. As the President had said, that knowledge was likely to come, not so much from the collection of clinical and statistical data, as in the past, as from physiological and laboratory procedures upon the hormones and their interaction with the sympathetic nervous system and the blood vessels. Such advances were possible only in properly trained and equipped obstetrical units within teaching hospitals, supported by the necessary ancillary scientific workers. The practice of medicine and of obstetrics in particular would always be an art, dealing with live persons often in emergencies and under emotional circumstances; but the growing edge of medicine was the placid scientific side, from which would come knowledge of the prime cause of eclampsia, probably within the next decade.

G. SIMPSON (Melbourne) said that one of the great changes in recent times in the practice of midwifery had been the swing to hospital confinement. He regretted the change; the normal patient was safer, happier and more comfortable in her own home, and treated at much less cost. Dr. Simpson said that childbirth should be a normal physiological process, not a major surgical crisis, which confinement in hospital suggested and often implied. He went on to describe the visiting midwifery service of the Melbourne District Nursing Society; with its own ante-natal clinics, and the cooperation of the Women's Hospital for the investigation and treatment of abnormalities, it provided a completely organized service. Since September, 1930, about 7000 *multigravidae* had been satisfactorily delivered. The majority of abnormalities were eliminated by careful ante-natal care; abnormalities arising during labour were generally dealt with by the transfer of the patient to the Women's Hospital, though most could be dealt with by "medical aid". Three deaths from hæmorrhage occurred after transfer of the patients to hospital; Dr. Simpson thought that blood transfusion in the home would have saved the lives. He advocated strongly the setting up of a "flying squad" to deal with such emergencies. One other death had occurred, the patient, who was suffering from chronic nephritis and was delivered prematurely, having been told that she was unsuitable for delivery at home. Complications in the puerperium were rare; the morbidity rate was 1%, and only one breast abscess had occurred. Dr. Simpson regretted the world-wide tendency to hospital delivery and the forgetting of the good results achieved by domiciliary midwifery in the past. He pointed out that the community and the families concerned would have to bear the great cost of a service that was in most cases unnecessary. The average cost per patient in a community midwifery hospital in Melbourne was £19 8s., and the total cost of a first baby was about £100—much too high a price in a young country like Australia which so desperately needed babies. Dr. Simpson urged that governments should give special grants to midwifery hospitals to enable them to keep fees down to a reasonable level; he held it to be wrong to concentrate on public hospital patients and neglect those who wished to pay. Turning to the modern tendency to smaller families, Dr. Simpson said that he was in favour of it. If the present living standards were to be preserved, three or four child families would have to suffice. The world was more than comfortably filled, and the political cry of "populate or perish" was unjustified. A policy of restraint in population would be a world benefit. Medical men, from the recent appreciation of the physiology of ovulation, were in a position to give suitable advice to mothers as to how to control their fertility even without mechanical or chemical aid. With regard to ante-natal clinics, Dr. Simpson commended their work; and said that their failures were most often due to incomplete examination or irregular attendances. He described the Melbourne District Nursing Society's methods of keeping patients under regular supervision and the thoroughness of their investigation; only one case of eclampsia had been recorded in 7000 deliveries. He referred to the recent development in Melbourne of the health department's pre-natal supervision centres, the result of the work of the late Dr. Vera Scantlebury Brown, Director of Maternal, Infant and Pre-School Welfare from 1926 to 1946. In 1947-1948 ten centres were operating, and



2153 patients referred from public hospitals paid 7463 visits; thus already overcrowded clinics at public hospitals were relieved. Dr. Simpson urged care that the pre-natal supervision centres were staffed by obstetricians who maintained contact with modern teaching, and did not degenerate into "urine testing stations". In the ante-natal period many abnormalities were remedied or prevented; the emphasis was always on prophylaxis. The obstetrician of the past was resourceful and skilled in dealing with terrible emergencies; in the future intelligent anticipation and prophylactic measures, which were for the most part easy, would replace the heroic procedures of the past.

S. E. CRAIG (Perth), from the chair, in opening the discussion, thanked the speakers for their papers and said that he did not wish to see a return to domiciliary midwifery.

J. J. HOLLAND (Perth) said that he thought that the care of a woman, once she was three months pregnant, should be that of the nation, and help should be given to her in other ways than by money.

H. CALLAGHER (Perth) thought that probably there was a lot to be said for domiciliary confinement; usually the reason given for not praising it was its inconvenience for the doctor. He thought that it probably carried a lower mortality rate for mothers and babies. He considered that financial considerations had a great deal to do with the limitation of families, and that most parents desired their children to have more than they had had. Someone had checked up the wills published in *The Times*, and had found that the wealthy should have had far more children than they had; usually the reverse happened and the poorer people had larger families. The lack of domestic help was also a great factor, but Dr. Callagher considered that the important thing at the moment in the limitation of families was the housing situation. He asked Dr. Johnstone if magnesium sulphate was used prophylactically in treatment of the preeclamptic patient.

F. A. MAGUIRE (Sydney) thanked the speakers for their papers and said that they were reliable guides to future problems. One of those problems was that of full-time or part-time university chairs. During his recent trip abroad Dr. Maguire had found that there was a great deal of concern in America, England and Scotland at the policy of full-time clinical chairs. It was thought by many authorities that it was not wise to appoint brilliant young men, who had had an excellent academic and post-graduate career, but who had had no practical experience of actual practice. They had to teach students, but had no practical knowledge of the pitfalls and difficulties that beset the practitioner when he approached a patient. It was the human touch that was lacking, and without it the most brilliant academic attainments were of little help in teaching students who had to practise. The alternatives were to appoint older men who had had experience in practice, but who would, of course, expect huge salaries, or to make part-time appointments from among good men who could still carry on some of their private practice and so keep in touch with the people. It was the latter course that he advised the university authorities in Western Australia to follow. Full-time appointments for pure research work should be free from teaching responsibility, for soon the latter overwhelmed the former and the research worker became more and more a teacher and instructor. In designing obstetrical departments and hospitals it was essential to provide adequate accommodation for both pathological and X-ray work. The use of X rays was almost universal in Britain and America, and no department could be regarded as properly equipped without X-ray facilities, preferably in close proximity to the labour wards. In the north of England and in Scotland opinion had swung right round from the policy of isolating young babies from their mothers. They were nursed in cots alongside their mothers, who fed and nursed them from the beginning, and the baby learned what mother love was. Where the baby was isolated in a glassed-in compartment, the mother took it home at the end of ten days or so and regarded it as a strange little animal of which she knew nothing and which she did not know how

to handle. Practical experience had shown that there was no great risk of infection. Professor J. C. Spence, who was among them, had strongly urged that method in the care of babies, and obstetricians should follow his advice. Further, mothers could help to take the strain off the nursing staff, which at present was sadly depleted.

MARY DE GARIS (Geelong) said that she thought that large families would not appear again until they were an advantage to the parents, as they were in rural areas. Babies were becoming more fashionable, and the fashion should be encouraged. At present it was impracticable to have domiciliary confinements, but she thought that mothers might be sent home from hospital earlier than they were.

R. F. MATTERS (Adelaide) said that in the design for the future, X-ray centres should be included so that pelvimetry could be carried out. He thought that Willett's forceps used on the scalp for the extraction of the head in lower segment Cæsarean section could cause trauma. He found that Morrison's forceps were helpful. He asked Dr. Johnstone what he thought about giving morphine in large doses to eclamptic patients in view of its effect on the pituitary gland which governed water metabolism. He agreed with Dr. Maguire on the value of domiciliary midwifery if more fully or semi-trained nurses were available.

K. G. WÖRNER (Perth) wished to join issue on the question of domiciliary midwifery. He liked to see every patient having her baby in a modern hospital. He could vouch for the benefit of the "flying squads" which were used in England for transfusion work in emergency conditions in the homes. He did not think that women wished to have their babies at home. Referring to the question of small families, he considered that the reasons put forward by women were only excuses. He thought that if people had larger families, the domestic problem would be solved.

J. W. JOHNSTONE (Melbourne), in reply to Dr. Callagher, said that he did not know quite how magnesium sulphate brought about its effects. It would be reasonable to give it in toxæmia in which symptoms as well as signs were present. The doses given were 10.0 millilitres of a 50% solution at once when the first seizure occurred, then 2.0 millilitres of the same strength every four hours or after each seizure. That worked out at 10.0 grammes per day. It was given carefully as an intramuscular injection. Five millilitres of the solution were given if it was thought that a seizure was going to occur. Dr. Johnstone was ignorant of any effect of morphine on the pituitary or suprapituitary glands. Morphine certainly relaxed smooth musculature, and the prime factor of eclampsia was vasoconstriction of the smaller arterioles. Morphine also relaxed the smooth musculature of the kidney. If it was possible to cut off the action of the sympathetic system, the muscular spasm would be relaxed.

G. SIMPSON (Melbourne), in reply, said that the cost of having a baby was now approximately £100. In 7000 cases of domiciliary midwifery from the Melbourne Hospital there had been three maternal deaths. Dr. Simpson considered that domiciliary midwifery was safe when covered by ante-natal care, and backed up by a hospital in which patients with abnormal conditions could be treated. He thought that domiciliary midwifery would come again.

B. T. MAYES (Sydney), in reply, said that he was keen on the use of radiology in obstetrics. He had attached to his department in Sydney Dr. Geoffrey Maitland, who gave lectures to sixth year students. He thought that radiology's first place was in the measurement of the pelvis where some difficulty was expected. He did not consider that the radiologist's estimation of the size of the foetal head was yet accurate. Many unpredictable factors were present, such as the strength of the uterine contraction and the amount of moulding which would take place. He thought that radiology was of use in the estimation of the fetus in cases of induction on account of the Rh factor or of toxæmia. The estimations were not accurate, but the lower femoral epiphysis usually appeared at the thirty-sixth week. Professor Mayes agreed with Dr. Matters that Willett's scalp forceps could cause damage, but they were useful, as were Duval's lung forceps, to apply to the delicate

bleeding edges of the muscle in lower segment Cæsarean operations. Green Armytage, of London, used similar forceps to Duval's, which were solid instead of being fenestrated. Professor Mayes thought that the difficulty of obtaining hospital beds was so acute at the present time that domiciliary midwifery might be brought back into the limelight, although he himself was always in favour of hospital treatment. He did not think that it was harmful for the puerperal patient to sit out of bed on the second or third day, provided she remained in hospital, went to a convalescent home or was visited by a nurse for the next ten days. He thought that the baby should be nursed in the mother's room, as it often made the mother happier. At the Coombe Hospital in Dublin, babies remained in bed with their mothers and were taken out only for toilet care. Apparently the rate of infection was no higher.

#### Myomectomy.

ROBERT FOWLER (Melbourne) read the opening paper in a discussion on myomectomy. He said that the surgeon's objective was an expeditious and complete removal of fibroid tumours with a view to preserving a competent uterus. He discussed the operation from the historical point of view, and drew attention to some earlier faults in technique, for which hysterectomy had been the only remedy. At the present time it was possible by extended myomectomy to "ransack" any part of the uterus for fibroid tumours and still leave a functional organ. He said that the realistic surgeon would not practise the operation indiscriminately, but would logically correlate indications and technique. The alternatives were four: (i) watchful expectancy, (ii) myomectomy, (iii) radiation therapy and (iv) hysterectomy. When child-bearing did not enter the picture, a difficult myomectomy was not justified in order to retain a non-fertile uterus; hysterectomy was safer and more expeditious, and it afforded a lasting cure for fibroid tumours and a refuge from the menace of malignant disease. Apart from fertility, the menstrual cycle had no particular significance. When hysterectomy was advised, the patient should be reassured that after the operation she would remain just as much a woman. In pregnancy complicated by myomata, watchful expectancy was the rule; but in the earlier months myomectomy might be warranted on account of (a) rapid growth, (b) threatened obstruction of the birth canal by the tumour or (c) pain threatening to stimulate uterine contractions. If the tumour was so large that it was unreasonable to expect the pregnancy to continue, hysterectomy was indicated, especially in the treatment of older women. At term, if the tumours made delivery by Cæsarean section necessary, the operation should be completed by hysterectomy rather than by myomectomy. Myomectomy had mainly to be considered in the treatment of non-gravid "prospects". Referring to the contraindications for myomectomy, Dr. Fowler said that the age of the patient and the marital status might preclude the desirability of child-bearing. A woman aged over forty years, especially if likely to remain unmarried or a "career woman", was unsuitable for myomectomy except of the simple amputation type. Even then there was the risk of overlooking an associated endometrial carcinoma. In fact, in view of the frequency of associated pelvic abnormalities, the decision between myomectomy and hysterectomy would often be made when the patient was on the operating table; she should be warned of that uncertainty. Dr. Fowler concluded his paper by discussing the technique of myomectomy and by showing a number of tables relating to the operation.

E. BRETTINGHAM-MOORE (Hobart) said that he had hoped to learn more of the etiology of myomata. That would have a bearing on the need for removing every possible myoma in a given case, as the condition that brought about the growth of one small—and indeed at some time microscopic—seedling would presumably have the same ultimate effect on all the others present. As the seedlings were found on histological examination to be much more numerous than was generally supposed, some local activating agent must be present, otherwise myomata would be nearly always multiple, and nearly always recurrent; as was seen from the tables referred to by Dr. Fowler,

that was not the case. Dr. Fowler had mentioned the earliest operations for removal as having been by torsion of the protruding or easily reached submucous type. Nature itself took a hand at times, and in rare cases of pedunculated subserous fibroid tumours the stalk was ruptured or died, and the tumour continued its existence in the abdominal cavity, having previously effected a secondary nutritional supply through adhesions. Dr. Brettingham-Moore had even been presented by a patient with a specimen of the submucous variety passed *per vaginam*. He said that although most myomectomies were by no means urgent, nevertheless some were made necessary by sudden and violent pain and in fact by all the signs and symptoms of an acute abdominal emergency. That was usually due to torsion of the pedicle, or it might be due to a hæmorrhage into an intramural myoma. As Dr. Fowler had pointed out, the main deciding factor between hysterectomy and myomectomy was the possibility of retaining the child-bearing function. However, Dr. Brettingham-Moore did not agree that apart from fertility, the menstrual cycle had no significance. The psychological effect of a continuance of the cycle might be profound. Also menstruation tended to preserve the activity of the ovaries, which otherwise gradually lost their function, and the "middle-age spread" and like phenomena soon made their appearance. The difficult and dangerous multiple myomectomy might often be avoided by recourse to a Beutner's operation, which was not technically more difficult than the usual subtotal hysterectomy, as if the adnexæ were diseased it allowed of their dissection from within out and from below up. An ovary was left if possible. With reference to the infrequent occurrence of myomata in pregnant women, Dr. Brettingham-Moore said that it could be no accident that the incidence was greatest in unmarried or nulliparous women between the ages of twenty-five and thirty-five years—the middle of the child-bearing age. It was probable that one factor might be the constant stimulus of the monthly ebb and flow of function without the steadying effect of pregnancy and the ensuing involution. Nature seemed to exact penalties when her functions were either abused or not used. As far as myomectomy during pregnancy was concerned, Dr. Brettingham-Moore had never found it necessary. If it was performed in the early months, it was likely to cause termination of the pregnancy. Further, a pronounced retrogression in the size of the tumour always followed the confinement. If myomectomy seemed necessary on account of the tumour's position in obstructing the birth canal, a Cæsarean section was the answer, not necessarily accompanied by a hysterectomy. It was astonishing how little the pregnant uterus seemed to resent an intramural or subserous fibroid tumour, while pregnancy for some reason was excessively rare when the submucous variety was present; that was possibly due to early and often unnoticed abortions, and also to endometrial changes. Even a myoma in the lower part of the uterus was generally drawn up out of the birth canal with the upper uterine mass when labour commenced, and it was well to postpone the Cæsarean section until after a trial of labour.

R. F. MATTERS (Adelaide) commented on two factors. The first was the association often found between endometriosis and fibroid tumours, and the second was his belief that the menstrual cycle was of value to women and that the association of the ovarian and endometrial cycles produced some endocrine changes. He thought that for that reason, the uterus should be preserved as much as for its function of child-bearing. Ten years previously at a meeting of the Royal Australasian College of Surgeons in Melbourne, the late Roy Chambers had described a rubber tourniquet which he used in the operation of myomectomy to give a bloodless field. There was the risk, however, that it might give rise to delayed hæmorrhage. Some people held that myomectomy should never be performed during pregnancy; but occasionally when necrobiosis occurred operation was forced on the doctor by the patient's misery. Dr. Matters had performed the operation under those conditions up till a stage of six months' gestation.

H. W. HOAN (Brisbane) thought that the significance of one phase of the lecture might have been missed—



namely, how extremely important it was for the cavity to be completely closed. He recalled being asked by a colleague to examine a patient who had a temperature of 104° to 105° F. after a myomectomy, and whose uterus was palpable at the umbilicus. They had been forced to reopen the abdomen and found an enormous hæmorrhage in the cavity.

F. A. MAGUIRE (Sydney) said that he was very strongly in favour of conservative surgery in young women. Unfortunately, in some gynaecological departments there was a cult for taking everything—making a clean sweep of the pelvis—and he knew of many young women who had had the uterus, both Fallopian tubes and both ovaries removed in their early twenties. That was a grave reproach to gynaecology and should be deprecated. The main practical problem he had found was to make absolutely sure of complete hæmostasis in the uterine wound after myomectomy. Even a slight oozing would cause a pool of blood to accumulate in the pouch of Douglas, where infection could cause a dangerous flare-up of inflammation and had at times called for drainage by colpotomy. He gave all his myomectomy patients an ergot mixture for at least a week after operation to encourage the uterus to contract.

R. BEARD (Adelaide) considered that the choice of operation between hysterectomy or myomectomy could be made only by the most experienced surgeon. He cited one case of myomectomy which he had performed on a patient, aged forty-five years, who was married for the third time. After the operation she became pregnant for the first time. He did not consider it was often necessary to perform myomectomy for degeneration during pregnancy. He had opened an abdomen on one occasion when the patient was four months pregnant and had found the fibroid tumours so inaccessible that he did not attempt their removal, but later performed a Cæsarean section and myomectomy combined. That patient had since had a baby delivered vaginally. He considered that Cæsarean section and hysterectomy were correct procedures to adopt when there were obvious changes in the fibroid tumours.

B. T. MAYES (Sydney) said that the outstanding feature of the papers was the ring of genuineness and sincerity which obviously came from experience. He made a strong plea for conservative treatment during pregnancy. He was interested in Dr. Matters's statements. He had been able to carry patients through their pregnancy with a few doses of morphine and warmth. If myomectomy was performed during pregnancy later than the fifth to sixth month, it might weaken the uterine walls. He said that degeneration and liquefaction of a fibroid tumour could occur during the puerperium. He cited one case in which two weeks *post partum* the uterus was up to the umbilicus and pyrexia was present. Culture material from the vagina contained no pathogenic organisms, and hysterectomy was performed with good results. Professor Mayes warned people that they must keep in mind the effect of a subsequent labour on the uterine wall after myomectomy. It was easy to forget those facts at 2 a.m. when the patient's history card was not available.

P. C. THOMAS (Perth) said that he found that the difficult cases occurred among patients aged from thirty-nine years onwards. Up to the age of thirty-five, myomectomy was performed if possible. He considered it necessary to try to determine beforehand the patient's reaction to a possible hysterectomy. By performing a high supravaginal hysterectomy, one could retain menstruation and the mortality and morbidity rates were less than in myomectomy. He also considered that tubal patency should be established before, during and after operation. He quoted Victor Bonney's figures; he had said that 40% of patients might be expected to become pregnant after operation, 75% to have normal labours, 90% to have no further trouble and 0.75% to need hysterectomy.

H. C. CALLAGHER (Perth) considered that conservation of the menstrual function was necessary. Young women usually wished to retain their chances of becoming pregnant. He had been Victor Bonney's assistant at one time, and he could not fail to remember his myomectomy clamp

and thought it was of real value. The competency of the uterus could not be overlooked if a Cæsarean section was being performed for the first time. Three of Dr. Callagher's patients had had further children after Cæsarean section and myomectomy. With regard to necrobiosis, the pain complained of by the patients used to worry him, and he had operated in a few cases. He had learned since that the pain, even if severe, did respond to sedatives.

Robert Fowler (Melbourne), in reply, thanked members for their lenient treatment and for the informative discussion. Several speakers had said that myomectomy should be performed by experienced surgeons; but frequently the decision between myomectomy or hysterectomy had to be made on the operating table.

L. W. GLEADELL (Melbourne) used a routine at operation. He injected 5.0 millilitres of Bonney's blue into the uterus before operation. That sterilized the uterine cavity and filtered through the Fallopian tubes, showing them up and thus helping to identify the uterine cornua. There was no irritation of the peritoneum if a watery solution was used. He thought that the myomectomy clamp was not always used to perfection, and agreed that a rubber tube was very good. He said that Dr. Horn had stressed the most important point of accurate closure of the cavity. If it was not closed, the cavity could behave like a test tube of blood and anaerobes, giving rise to peritonitis and paralytic ileus. His operative mortality at first had been 10%, but now he did not regard the operation as dangerous.

W. K. MCINTYRE (Launceston) made a plea for longer time for the speakers than for discussion. He considered that the conservation of the uterus in women in the thirties was most important. He said that it was his practice to perform a Rubins test before and after myomectomy.

#### Delayed Labour.

R. BEARD (Adelaide) read the opening paper in a discussion on delayed labour. He said that the problem was difficult; the literature was extensive, and modern research and pelvic radiography necessitated even more clear thought, judgement and decisions regarding the management of the condition. The indications for Cæsarean section required definition; obstetric opinion was at present divided on the subject. Dr. Beard went on to say that the causes of delayed labour could be considered under three well-known headings: (i) the passage, (ii) the forces and (iii) the passenger. With regard to the passage, he said that dystocia arose more often from the soft parts than from the bony pelvis. He mentioned the various pathological conditions and abnormalities that might be involved, and discussed the treatment of ovarian tumours and myomata. He stressed the importance of careful examination of the pelvis during pregnancy, in order that correct treatment at labour might be applied. A careful history, thorough clinical examination and measurement of the pelvis were essential. Pelvic radiography was advised when the pelvis was deformed or when the measurements were small. However, the possible inaccuracies of X-ray measurements of the pelvis should always be remembered. Dr. Beard referred to the classification made by Caldwell and Moloy of pelvises with their characteristics (gynæcoid, android, anthropoid and platypelloid), and stressed its value. He urged the pooling of ideas by obstetrician and radiologist. He said that digital examination of the pelvis was of the first importance, and emphasized the value of a trial of labour. The avoidance of meddlesome midwifery was strongly advised. Turning to the second heading, Dr. Beard said that in spite of the importance of normal pelvic measurements, the physiological forces of labour were the most vital factor. He discussed primary inertia or uterine insufficiency and its possible causative background; the factors involved were (i) poorly developed uterine musculature, (ii) anomalies of uterine innervation, (iii) loss in tone of uterine musculature, (iv) mechanical interference, (v) a large foetus and (vi) fear. The great importance of fear was stressed. Dr. Beard discussed general management measures, mentioning particularly reassurance and rest for the patient and reassurance for the relatives. The principle of treatment of primary uterine inertia was "stimulants by day, sedatives principally at night". He described the



remarkable capacity of the natural forces of Bantu women for unaided delivery. With reference to the passenger, Dr. Beard briefly mentioned two common obstetric abnormalities which might cause delayed labour—the occipito-posterior position and breech presentation. With regard to the former, he said that there was a great divergence of opinion between authorities, some of whom minimized the seriousness of the position while others emphasized it. He suggested that some overlapping factor not usually mentioned must be present, clarification of which might eliminate the disagreement. General lines of treatment were given. With regard to breech presentation, Dr. Beard emphasized the value of external version as a preventive of prolonged labour. He recommended X-ray examination of the fetus when doubt existed as to the presentation or the presence of multiple pregnancy *et cetera*, before the obstetrician persisted with version. X-ray examination was also advocated before Caesarean section when it was thought possible that a breech presentation might be involved. Dr. Beard finally described some methods of vaginal delivery of a fetus presenting by the breech.

H. W. HORN (Brisbane) said that delayed labour at its worst was one of the most distressing conditions in obstetrics. When it was due to inefficiency of the powers, the obstetrician's impotence was at its highest level, because the physiological stimulus which led to and maintained labour was not understood. With regard to primary uterine inertia, Dr. Horn said that he agreed with Dr. Beard that the general policy in treatment should be sedation alternating with stimulation; but he proposed to mention the use of pituitary oxytocics. Many obstetricians freely used them in the medical induction of labour and in haemorrhage, but shunned them when the patient was in what might be termed "subdued labour". The dislike was based on fear of the action of the oxytocics, not on doubts of their efficiency; Dr. Horn's experience over some years had satisfied him that the fear was not justified, provided small doses only were given. Presenting the results of 26 cases of primary uterine inertia occurring in 3000 confinements in the public division at the Brisbane Women's Hospital, Dr. Horn said that the confinements were conducted by experts, without pituitary, and they showed where the real danger lay. Normal delivery resulted in nine cases, instrumental delivery was required in 12 cases and Caesarean section was performed in five cases. All five infants delivered by Caesarean section survived; of the 21 infants delivered *per vaginam*, five were stillborn. No mother died or suffered from gross injury or severe sepsis. It was thus clear that under expert supervision, the chief danger of primary uterine inertia was stillbirth. Dr. Horn then reviewed a series of 30 cases of inertia of his own, extending over a period of ten years; all the patients had received pituitary, usually pitocin. In five cases the pitocin had no apparent effect on the uterus, and two ended in Caesarean section, both because of failure in dilatation. In five cases normal labour resulted; however, that might have occurred ultimately without pituitary. In the remaining 20 cases "some improvement" was noted; that meant that contractions were enhanced, and that at the next vaginal examination dilatation had increased. Instrumental delivery was carried out in all but two of those cases. Two stillbirths followed vaginal delivery, and one child died after eighteen hours from cerebral injury, probably due to anoxia. In that series, as in the other, there was no maternal death or gross sepsis. Comparison of the two series proved, first, that pituitary did not produce an increase in the fetal mortality rate, and secondly, that in no case did it produce turbulent labour, leading to maternal tragedy such as rupture of the uterus or cervix. Thus it was safe to retain pituitary in the armamentarium of drugs for the treatment of primary uterine inertia; it might occasionally effect a cure, and it would often be of help. A woman who had been in labour for twelve hours or more, who showed mental distress, and whose pains were weak, short or infrequent, should receive one-quarter of a grain of morphine. Persistence of inertia pains after rest might call for pitocin in a dosage not exceeding one-quarter of a millilitre. Provided that the pains were not enhanced, the dose might be judiciously

repeated at intervals of half an hour for four doses. Thereafter sedation should be continued, usually with barbiturate or pethidine. Dr. Horn said that he had never given more than two courses of pitocin in twenty-four hours, and in a few cases in which he had used an oestrogen (50,000 units every two hours) he had noted no effect. With regard to Caesarean section, it was difficult to know when it should be performed. In the absence of sepsis fetal distress would be an absolute indication; but a decision based on failure in dilatation after "reasonably long" labour must be a matter of wise judgement and experience.

B. T. MAYES (Sydney), in opening the discussion, said that he thought the subject most important. He wished to make two points. One was the role played by fear. He thought that the abolition of fear in labour gave rise to more productive effort, and he referred to the writings of Grantly Dick Read. The other point was the avoidance of induction of labour, especially in *primiparae*, particularly for what was known as post-maturity. He said that occasionally one had a post-mature placenta, but not a post-mature baby. In discussing brow presentation as a cause of delayed labour, he said that the treatment had changed in the last ten years. The diagnosis was seldom made until labour had been in progress for some time and the cervix was fairly well dilated. By that time the membranes had usually been ruptured for some hours and version with breech extraction was to be avoided. He considered that lower segment Caesarean section was the treatment of choice, together with the use of penicillin. Professor Sheehan, of Liverpool, presenting his paper at the Dublin Congress in 1947, had discussed the question of shock in obstetrics; Professor Mayes considered that term much more desirable than obstetric shock. Professor Sheehan had found, after post-mortem examination, that shock was greatest in subjects who had been more than two days in labour and whose placenta had been left in the uterus for more than two hours. He said that he was interested in Dr. Horn's remarks regarding oxytocics. Things could be done without harm by experts which would be dangerous in the hands of less experienced people.

MARY DE GARIS (Geelong) said that she considered that delay in labour was often due to faulty action of the uterus, and that when the muscles of the body of the uterus contracted those of the cervix failed to relax. She thought that it was their business to find out the pathology of delay in labour. She thought that it might be due to acidosis, and therefore gave alkalis to all her patients during the last few weeks of pregnancy and during the early part of labour. She thought that oestrogen did not help the first stage of labour, but might help the second stage if it was given early enough.

J. W. JOHNSTONE (Melbourne) said that when considering delayed labour one should not take into account single factors, but must regard the powers, the passages and the passenger as a single entity. One had patients with a particular somatic make-up—for example, those with the android pelvis and the male distribution of hair; such patients frequently had a delay in some part of their labour. With regard to ovarian cysts complicating pregnancy, he considered it better not to remove them during the first trimester, but to wait until four to four and a half months. Discussing breech presentation, he said that he thought the fetus should be turned as soon as possible—for instance, at thirty-two weeks. It could be turned again if necessary. He thought that the breech presentation with extension of the legs was a physiological failure in the attitude of the fetus. There was a great tendency to spontaneous version at thirty-two weeks. A fetus with extended legs did not turn spontaneously as a rule at that time. He cited the example of the laying of an egg. The egg descended the oviduct with the pointed end to the front, and before it was extruded the egg turned round and was born with the blunt end first.

D. QUINLAN (Perth), discussing uterine inertia, said that the cervix was often one-half dilated and then remained in that state for some time. He asked Dr. Beard what he thought should be done with such patients.

F. A. MAGUIRE (Sydney) drew special attention to two "forgotten men" in the anatomy of the pelvic floor: (a) the triangular ligament and (b) the pyriformis muscles. Contrary to the teaching of Hart and Barbour that the pelvic floor opened like a double folding door, the urethra and base of the bladder were anchored to the rami of the pubis and ischium by the triangular ligament. The only direction in which they could go if there was undue pressure by the descending head or breech was downwards, and the triangular ligament was stretched down, with resulting urethrocele and cystocele. In the postero-lateral quadrant of the pubis the pyriformis muscle formed a soft elastic cushion with the sacrospinous and sacrotuberous ligament below it and the *gluteus maximus* and *gluteus medius* behind it. He described a "three-way" method of examination *per vaginam* that demonstrated those relationships. It was on to that elastic and resilient pad that the leading part descended, and it was the first part of the pelvic floor that it hit. Dr. Maguire was confident that it was the main factor in revolving the leading part, whether sinciput or occiput, into the mid-line. Anyone could feel for himself the effect straining or coughing had by putting the fingers on that muscular fibrous pad in a vaginal examination.

K. G. WORKER (Perth) thought that the reports from radiologists during pelvimetry should be taken with reserve as far as the outcome of the labour was concerned, as the uterine forces and the moulding of the head could not be foreseen. The foetal head should be fitted into the pelvis in each case. He agreed with Professor Mayes about not inducing labour in *primiparæ* except under specified conditions, and thought a foetus presenting by the breech should be turned early. He said that he always applied forceps to the after-coming head if there was any difficulty at all, and stressed the importance of the slow delivery of the head. Babies died from intracranial hæmorrhage due to too rapid delivery.

W. K. MCINTYRE (Launceston) asked if it was generally known that there was great danger in using pituitrin in combination with cyclopropane anaesthesia. It had been said that there was a tendency to fibrillation of the heart from the use of cyclopropane, and that the vasoconstriction due to the pituitrin could be sufficient to cause death. Either ergometrine or pitocin should be used in its place.

G. A. THOMPSON (Perth) thanked the previous speakers for their papers. He said that primary uterine inertia was often associated with the following three things: (i) excessive size of the foetus, (ii) posterior positions, (iii) premature rupture of the membrane. The posterior position was not important, provided that the membrane remained intact, but the size was extremely important. He considered that the size could be controlled by reduction in the carbohydrate intake of the mother in the later months of pregnancy. If at six months the size appeared to be excessive, he divided the intake by one-half, and he had almost eliminated primary inertia from the first cause from his practice. In nearly all cases, the inertia passed off when the cervix was three-quarters dilated. With regard to breech presentation, he performed external version when he found it. Dr. Johnstone had stated that a foetus presenting by the breech could not be turned. He considered that in the frank breech presentation at six months the legs were not fully extended and that at full term they were hyperextended. He found that occasionally he could take hold of incompletely extended legs and flex them.

H. T. ILLINGSWORTH (Wiluna, Western Australia) referred to the medical induction of labour and asked that someone should elucidate for him the correct method. He used the following method: castor oil, one ounce, and quinine sulphate, ten grains, were administered, a hot bath was taken and ten milligrammes of stilbestrol were given at hourly intervals. Then 0.5 millilitre of pituitrin was given at half-hourly intervals.

B. M. SUTHERLAND (Melbourne) said that the primary object in obstetrics was to produce a living baby and to conserve the mother. In Victoria there were bush nursing hospitals, and he wanted something to emerge from the discussion which would be a tangible guide to younger

men, so that they could carry them out under the conditions in which they were working. In 1947 3700 patients had been looked after in bush nursing hospitals with a mortality rate of 0.4 per 1000. In 1948 there had been a few calamities, either from lack of knowledge or from fear on the part of the young men concerned.

R. Beard (Adelaide), in reply, said that he was grateful to the speakers for supporting his suggestions. With regard to Dr. Horn's statement about the use of pituitrin in primary inertia, he thought that it should be used only by very experienced people and with a capable nurse in charge, and he would use a smaller dose. He agreed with Professor Mayes's remarks. He was interested in the remarks made by Dr. De Garis, and thought that in the case of occipito-posterior presentations it was necessary to note carefully the progress of labour. It was possible to find occipito-posterior presentations in every type of labour. Replying to Dr. Johnstone, Dr. Beard said he still thought that the third month of pregnancy was a good time for performing ovariotomy, as later the procedure became technically difficult. As far as breech presentations with extension of the legs was concerned, he thought that version should be carried out as early as possible, and that nature was the greatest versionist. To Dr. Quinlan, he said that when the cervix was half dilated, he was inclined to leave the patient if she was a young woman rather than interfere, and to let things take their own time. To Dr. Illingsworth, Dr. Beard said that in a medical induction of labour he never gave more than three minims of pituitrin in one dose, and he did not favour the use of quinine.

#### Total versus Subtotal Hysterectomy.

S. E. CRAIG (Perth) read the opening paper in a discussion on total versus subtotal hysterectomy. He said that he wished his paper to be a warning to the inexperienced against tackling total hysterectomy under difficult conditions. Total hysterectomy was the ideal at which to aim, but at times circumstances rendered the subtotal operation advisable. A cervix that had been removed could certainly not develop carcinoma; however, not every operator could perform the major operation without subjecting the patient to an operative risk far exceeding that of the development of cancer in a benign cervix. The most important deciding factor in the choice of procedure should be the capability or otherwise of the operator; the degree of operative skill varied within wide limits. Referring to the next factor influencing the choice of operation—difficulties encountered during the operation and their relationship to the surgeon's skill—Dr. Craig described a hypothetical case in which, after fairly careful examination, a diagnosis of fibroid tumours had been made and hysterectomy advised. However, unexpected trouble was met when the abdomen was opened, and the operator suddenly found himself confronted with one of the most difficult gynaecological conditions—endometriosis. When at last he had freed the adhesions and mobilized the chocolate cysts, much time had elapsed and much blood had been lost. Eventually the broad ligaments were freed and the level of the internal os was reached. The operator, who had lost much of his confidence, then had to decide whether to attempt to remove the cervix or to perform subtotal hysterectomy. He would be wise to stop at the minor procedure. If he did not, the patient might be left with some permanent morbidity. If he performed subtotal hysterectomy, persistent leucorrhœa might subsequently develop. That could be dealt with by the endotherm, although it was better for the patient's morale if any interference after operation could be avoided. There was also the problem of the lacerated, eroded and infected cervix; if it could be removed at the one session, the patient was better without that local septic focus. But in Dr. Craig's experience such a cervix was not particularly liable to the development of carcinoma; that was his opinion, but he admitted that it might be challenged. E. W. MUNNELL, in July, 1947, in a review of 1798 hysterectomies, recorded 215 total removals (some for malignant disease) and 1583 subtotal removals. The mortality rates were, respectively, 2.32% and 1.76%—a considerable difference. Munnell considered that most



lacerated and infected cervixes did not develop cancer. Dr. Craig also drew attention to the number of malignant growths occurring in virgin cervixes. He did not wish to discount the danger of carcinoma developing in the stump, but he believed that the incidence was not so frequent as when the whole uterus was present. Summarizing his position, he said that, although total hysterectomy was preferable for the reasons mentioned, yet the operator should consider his own capabilities impartially and balance them against the conditions found at operation, before he subjected his patient to the added risk of total hysterectomy.

F. A. MAGUIRE (Sydney) pointed out that the cervix was a sentient organ with its own special blood supply, nervous supply and lymphatic drainage, differing in every way from the body of the uterus. It might have functions which had not yet been realized. It should not be removed from normal multiparous women when a thorough inspection and curettage under anaesthesia showed it to be quite healthy. A supravaginal hysterectomy properly performed did not interfere with the main trunk of the uterine artery, but cut it at the level of the internal os or higher, and left the cervical blood supply intact. But if there were lacerations or chronic inflammation, the cervix should be removed. However, total hysterectomy was a formidable, difficult operation. He had heard men say: "Why not perform a total hysterectomy always? It is only another inch." But what an inch! It opened up all the pelvic connective tissue and went deep into the pelvis in close relation to the bladder and uterus. For total hysterectomy one needed a good light, wide exposure through a generous incision, and a good anaesthetic with complete retraction. That would allow the bowels to fall well back out of the pelvis and give complete exposure of the cavity. If there were no complications, the surgeon should have the uterus out in the first ten minutes, and devote the rest of the time (and a well performed total hysterectomy took about an hour) to absolute hæmostasis and complete peritonealization of the pelvic floor. The uterus should always be examined and curetted first and the vagina firmly packed with gauze to expand the fornices. That made the operation much easier. He had seen a number of patients with carcinoma in the residual parous cervix, but was sure that many of these had been missed by carelessness or by want of observation at the original supravaginal hysterectomy. Moreover, one often examined women who had had a previous section. When an old section scar was present, the operator should open the abdomen with the greatest caution, for one never knew what was behind the scar in the way of small hernia adhesions *et cetera*. The round ligaments and the cardinal ligaments were valuable in holding the vault up, and they should whenever possible be attached to the vault of the vagina.

H. C. CALLAGHER (Perth) thought that everyone was impressed by the fact that the question depended upon the skill of the operator. His own opinion was that the whole uterus should be removed. He had seen a carcinoma of the cervical stump which had appeared two years after hysterectomy, and had also encountered two other similar cases some considerable length of time after the original operation. Figures relating to the incidence varied. Some said that carcinoma would occur in 4% of cases. The blood supply to the cervix subsequent to subtotal hysterectomy led to later development of trouble. The mortality rate depended on the skill of the operator. Pre-operative blood transfusion should be given if the hæmoglobin value was less than 80%; it had the effect of making convalescence quicker and easier.

R. BEARD (Adelaide) said that he was not inclined to perform total hysterectomy as a routine. The subtotal hysterectomy mortality rate was high, but that for total hysterectomy would be higher if it was performed on every occasion. It was important that a patient with irregular hæmorrhage should have a curettage first. If treated by radium, a third of the patients with carcinoma of the residual cervix could be cured, because they came early for treatment. To achieve good results one needed good light and exposure. He thought that the use of the steep Trendelenburg position with the legs bent prob-

ably caused damage to varicose veins when they were present and might be a source of post-operative thrombosis.

H. R. R. GRIVE (Sydney) said that anything that made total hysterectomy easier was an argument in its favour. He found that using a large gauze scarf to tuck away the intestines, covering it with a piece of bent copper one and a half inches in width and placing the top blade of the retractor on top of it, kept the field of operation clear. He found that the vaginal branches of the uterine arteries generally gave trouble with hæmorrhage, and that clamps applied to them had a great tendency to slip off. For that reason he had had two clamps made—one with a spike and the other with a slot—and found them satisfactory. He said that there were two types of total hysterectomy. The first was the transcervical type, in which one removed the canal and afterwards sewed the residue together, which helped to keep the normal contour of the vaginal vault. The other was used when the cervix was diseased, and he removed it totally.

P. C. THOMAS (Perth) said that the decision concerning the type of operation was an individual problem for surgeon and patient. He understood that the percentage of occurrence of cervical carcinoma was between 0.2 and 2.0. With regard to the occurrence of leucorrhœa following the subtotal operation, he said that a general surgeon who had performed the operation had afterwards sent the patient to him to cure that complaint. The body of the uterus should be opened as soon as it was removed.

B. M. SUTHERLAND (Melbourne) said that he had encountered five cases of carcinoma of the cervix which had occurred a comparatively short time after operation. He said that in Vienna the surgeons did pelvic work with the patient put up in such a way that they could move from the abdomen to the vagina without altering the position of the patient.

S. E. CRAIG (Perth), in reply, said that by the virgin cervix he meant that of a woman who had had neither children nor miscarriages. He quoted the case of one patient who had had a subtotal hysterectomy fifteen months earlier and now had a carcinoma. He thought that it had been there before the operation. As far as prolapse of the cervical stump was concerned, it happened because the vaginal vault prolapsed.

#### Ante-Partum and Post-Partum Hæmorrhage.

W. K. MCINTYRE (Launceston) discussed ante-partum and post-partum hæmorrhage. He drew attention to the reduction in recent years in maternal mortality from infection and toxæmia. He said that hæmorrhage was now the most frequent cause of maternal death, and little or no improvement had occurred. Most of the deaths were preventable. The main causes of such trouble in late pregnancy were accidental hæmorrhages or *abruptio placenta* and *placenta prævia*. As it was not possible to make an accurate diagnosis at the first hæmorrhage, which was usually not severe, all patients with hæmorrhage late in pregnancy should be at once admitted to hospital for observation and examination. The diagnosis between the two conditions was usually impossible without digital examination of the cervix with or without X-ray investigation. The diagnosis of *placenta prævia* should not be made unless the placenta had been felt in the lower segment, or after operation; in some cases an X-ray examination might justify the diagnosis. Only when the type of *placenta prævia* had been determined could one decide on the best method of treatment. The cystogram was of value in certain cases. The soft-tissue X-ray film was also sometimes helpful. Referring to accidental hæmorrhage, Dr. McIntyre said that typical clinical manifestations were continuous uterine pain, tenseness and tenderness of the uterus, especially at the site of separation, and external hæmorrhage, with or without signs of concealed hæmorrhage. Admission to hospital and no interference was the best method of treatment if neither mother nor baby was showing signs of distress. In the presence of uncontrollable hæmorrhage, resuscitation measures should be instituted and the uterus emptied as soon as possible, the method depending on the condition of the mother, baby and cervix. Expectant treatment when possible was generally adopted for the child's sake.



Vaginal examination should be avoided unless there were special indications or unless the child was sufficiently viable for delivery. The diagnosis of *placenta prævia* depended on several factors: (i) whether the blood loss had been severe and was continuing, and the condition of the patient; (ii) whether the baby was alive—conservative treatment might then be justified; (iii) the type of placental attachment; (iv) the degree of cervical dilatation if labour had begun. Manual dilatation of the cervix should never be attempted. If malpresentation was a feature, Cæsarean section was indicated. Conservative treatment when possible, with complete bed rest in hospital, gave good results. Otherwise interference might be necessary, with the performance of Cæsarean section. Dr. McIntyre discussed the types of interference that might be required, and stressed the importance of combating shock. Turning to post-partum hæmorrhage, he said that it was the most frequent cause of maternal death from hæmorrhage. Its causes were (a) uterine inertia from causes operating during pregnancy, (b) retention of placental parts or placenta, (c) injuries, (d) abnormal placental site or attachment, (e) uterine inertia following ante-partum hæmorrhage and (f) improper conduct of any stage of labour. With regard to prevention, he referred first to the need during pregnancy for early blood grouping, for care of the patient's nutritional state, for correction of anaemia, and for special observation and treatment of patients with toxæmia, preferably in hospital. During labour, nourishment was important and fatigue and exhaustion should be combated by adequate sedation. Care was required with anaesthesia. Meddlesome obstetrics should be avoided and pituitrin should never be used with cyclopropane. Misuse of forceps and improper handling of the uterus in the third stage might lead to post-partum hæmorrhage, as might exhaustion of the patient due to a too prolonged second stage. Referring to cord injection, Dr. McIntyre said that he had found that the rapid injection of hot normal saline solution into the placenta stimulated contractions in the treatment of retained placenta, and was of even more value for the arrest of hæmorrhage. He discussed the indications and contraindications for the procedure, and considered that it would reduce the number of cases in which manual removal of the placenta was required. Dr. McIntyre also presented some statistics relating to the method. He had never packed the uterus after vaginal delivery, and had no regrets on the matter. Dr. McIntyre finally stressed the importance of keeping a watch on the uterus for at least an hour after delivery of the placenta; severe hæmorrhage might take place in a slack uterus.

W. D. SALTU (Melbourne) opened the discussion. In referring first of all to accidental hæmorrhage, he said that it had to be remembered that other factors were involved as well as hæmorrhage. The condition of shock was added in severe cases, but more serious still was the renal involvement. Most obstetricians had encountered cases of accidental hæmorrhage in which the patient had been safely delivered, but after delivery had developed oliguria and anuria and gradually died from uræmia. In a series of 362 consecutive cases of accidental hæmorrhage at the Women's Hospital, Melbourne, of eight maternal deaths, six were due to renal failure. One subject on post-mortem examination was found to have polycystic kidneys; one had chronic nephritis with a terminal blood urea content of 446 milligrammes per centum; another had cortical necrosis; two had suffered from severe eclampsia; and another with uræmic symptoms had had a decapsulation done without avail. The conclusion was that patients with accidental hæmorrhage rarely died from the effects of hæmorrhage and shock, but from the renal involvement. Of the 326 cases, fortunately the majority were mild, and little treatment was required. Sedation with the application of a tight abdominal binder, possibly supplemented by the administration of small doses of pituitrin, was all that was necessary; but even in the more severe types, Dr. Saltu thought that conservatism should be the rule. It was recognized that once a uterus was contracting in such cases there was not much risk of more serious hæmorrhage, and artificial rupture of the membranes was the treatment of choice. Even if

contractions could not be detected in the presence of the tender, tense and wood-like uterus, he considered that that procedure should be practised. Certainly he considered that Cæsarean section had little place in the treatment of accidental hæmorrhage unless there was a coincidental indication—possibly the rare one of a severe pre-eclampsia which was not decreasing with the usual conservative treatment, or possibly disproportion. In the whole series of 362 cases there were only three Cæsarean sections, and one of those was a "repeat" operation. Referring to *placenta prævia*, Dr. Saltu said that it was a condition in which hæmorrhage was uncomplicated as a rule by other factors, but was extremely treacherous; until the hæmorrhage was controlled and the patient was safely delivered, the condition gave rise to a great deal of anxiety. If a patient in the last trimester of pregnancy had a hæmorrhage and *placenta prævia* was suspected, and if the hæmorrhage ceased, the problem of future management arose. Naturally, if the initial hæmorrhage was fairly profuse, then the obstetrician's hands were forced, and he had to institute treatment. But if the patient, thirty-two to thirty-four weeks pregnant, had one or two slight hæmorrhages, and *placenta prævia* was suspected, how far was expectant treatment justified? Dr. Saltu did not subscribe to the view that once the condition was diagnosed the pregnancy should be terminated forthwith; but it was imperative that the patient should be in hospital under expert observation, so that if hæmorrhage became serious, immediate treatment could be carried out under good conditions. In that way a pregnancy could occasionally be carried on for another three or four weeks, and thus the prognosis for the baby improved. That observation applied with most force to the case of the elderly *primipara* or to the *multipara* who had not had a baby for a number of years. It was hardly necessary to emphasize the hazards of vaginal examination unless the patient was in hospital and one was prepared for immediate treatment. As a routine measure at the Women's Hospital, Melbourne, the patient who reported with a mild painless hæmorrhage was not examined, but was put to bed and given sedatives and her blood typed, and was watched closely. If further hæmorrhage occurred to any serious extent, she was examined and the appropriate treatment was decided upon. When the patient was in hospital under good conditions, blood transfusion could be commenced within a few minutes. Dr. Saltu then referred to the question of what constituted appropriate treatment. He said that during his eighteen years in the obstetrical department of the Women's Hospital, Melbourne, a great change had occurred in that connexion. In the earlier years of his association with the hospital, it could be said that if the state of the cervix permitted, almost the routine treatment had been version. The plugging of the placental site by the half breech of the child was certainly a most effective means of controlling hæmorrhage, but the fetal mortality was appalling and a live baby was a rarity. The procedure was apt to be associated with shock, and that added to the risks for the exsanguinated patient. Cæsarean section had rarely been performed. In those years blood transfusion was just coming into its own; but there were no blood banks, and by comparison with present-day methods the technique was crude. Effective methods of combating sepsis were unknown, and it was remarkable that results were as good as they were. Nowadays, Cæsarean section as a means of treatment in *placenta prævia* had come into vogue. In 275 cases in the ten-year period from 1937 to 1947, 150 of the patients, or 40%, had been subjected to section. There were seven maternal deaths among the 375 cases (1.8%); two of the patients had been admitted to hospital in *extremis* and died undelivered. One hundred and thirty-five (35%) of the babies had been still-born or had died early in the neonatal period. Unfortunately it was impossible to avoid a heavy fetal mortality, as so many of the babies were premature and suffered from anoxæmia, so that the fetal mortality figures seemed eminently satisfactory. It had been hoped that improvement in the maternal mortality rate might be possible, and as a matter of fact, in the last two years of the series, there had been 124 cases without a maternal death. There seemed to be a lot in the dictum of Greenhill that there

were only two satisfactory treatments, apart from expectant treatment—Caesarean section and artificial rupture of the membranes. The latter method of treatment had been carried out in a considerable number of these cases, although a few versions were still being done. The rupture of membranes had occasionally been supplemented by the application of Willett's clamp; that instrument had been given a good trial in past years with varying results, and was not used so much as formerly. Dr. Saltau considered that the employment of Caesarean section could be given some of the credit for the improved figures, certainly with regard to fetal mortality; but it had to be recognized that the ready availability of blood and the modern methods of combating sepsis had also played their part. Packing had been avoided as much as possible. Broadly, he would say that the indications for Caesarean section were: (i) the central type of *placenta previa* in all cases, with the possible exception of the early cases at twenty-eight to thirty weeks, which were rare; (ii) the elderly *primipara*, whatever the type of *placenta previa*; (iii) the patient with the closed os and profuse hemorrhage; (iv) possibly the patient with a long interval since the previous baby and within a reasonable distance of term.

Dr. Saltau then made a few general observations on post-partum hemorrhage. He said that they all knew how disconcerting it was when a patient commenced to have profuse hemorrhage during the third stage of labour. A certain proportion of post-partum hemorrhages were unavoidable, sometimes unpredictable. The risks following over-distension of the uterus, prolonged labour, uterine inertia, ante-partum hemorrhage and so forth, were all recognized, and one had to be prepared for them. But there still remained the oft-enumerated cause, mismanagement of the third stage—unnecessary handling of the uterus and premature attempts to express the placenta. What constituted control of the fundus in the third stage? Were they really correct in continuing to impress on students and nurses that it consisted of the resting of the hand on the fundus until the placenta separated? It seemed to Dr. Saltau that there was always the temptation to exert something more than the usual light pressure on the fundus, and that interfered with the normal mechanism of separation of the placenta. Dr. Saltau admitted that, whilst attending to the baby, he asked sisters to leave the fundus alone. After all, in many patients, it could be visualized and any increase in size noted, and if hemorrhage was revealed, then the fundus could be palpated and, if necessary, massaged. Apart from that intermittent palpation should suffice. There had always been the tendency to delay manual removal because the risk of putting a hand into the uterus had been so much emphasized. Those risks were certainly greater in the pre-sulphonamide and pre-penicillin days; but it was unfortunate that in the past that delay had cost mothers their lives. Those deaths might have been avoided had it been realized that it was far better to risk sepsis than allow the mother to die from hemorrhage. There was little excuse for delay at present. Once a woman had lost 20 to 25 ounces of blood and the loss was continuing, and if the placenta showed no signs of separating, then it should be removed. It should be remembered that from the point of view of shock, Credé's expression, if attempted too often, carried more risk than a manual removal when the patient was in a reasonably good condition. There should be no need to emphasize the importance of complete replacement of the blood lost in the cases under discussion.

J. W. JOHNSTONE (Melbourne) paid a tribute to Dr. McIntyre for producing such a series of statistics on the Mojon-Gabaston method of treating post-partum hemorrhage. He agreed with Dr. McIntyre in the stress he had laid on the importance of seeing that the patient was not anæmic before commencing her labour and of giving copious fluids and glucose during the labour. It was interesting to note, with regard to the recent changes in the treatment of *placenta previa* and accidental hemorrhage, that the former was by Caesarean section and the latter by artificial rupture of the membranes with Willett's scalp traction. In the case of *placenta previa* some conservative treatment was being used at Melbourne; if the

first hemorrhage was not gross and ceased with rest, the patient was kept under observation in hospital, and an attempt was made to allow the baby to be delivered as near as possible to term. Dr. Johnstone was interested in the question of the incompatibility of pituitrin and cyclopropane. He said that there were also other incompatibilities which should be noted—as, for instance, the use of chloroform and adrenaline at the same time; and if ergometrin and pituitrin were drawn up in one syringe, neither was effective. In teaching hospitals it was necessary to be circumspect in the use of oxytocic drugs during a delivery. Given when the head was born, they helped to keep the cervix open and gave a quicker delivery of the placenta. With regard to the question of giving ergometrin when the patient was exsanguinated and the placenta still *in utero*, Dr. Johnstone said that Chassar Moir gave ergometrin which locked the placenta in the uterus and controlled the bleeding. A transfusion of blood was then given, and when the patient was fit the placenta was removed.

B. T. MAYES (Sydney) said that there was a mass of experience behind Dr. McIntyre's figures. When DeLee was asked for the treatment of post-partum hemorrhage, he said "blood transfusion". Professor Mayes said that lower segment Caesarean section for *placenta previa* was the right operation. The placenta was usually on the posterior wall of the uterus. At the end of the Caesarean section he passed nothing either up or down through the cervical canal. If blood was present, the os was patent. If not, 0.25 milligramme of ergometrin was given and the dose was repeated in one hour, if no loss of blood occurred.

Professor Mayes went on to say that manual removal of the placenta should be treated with respect but not with awe. If the placenta was left in for more than two hours, shock was produced. Also, leaving delivery of the second twin for more than two or three hours was bad obstetrics and would also lead to shock and infection due to the cord's dangling over the anal region. As far as injection of the umbilical cord with saline solution was concerned, he had previously used it but no longer did so. He thought that one of the most important points that had been brought out was the danger of the use of pituitrin and cyclopropane. As far as packing the uterus was concerned, he had once used it, but would never do it again.

GRACE J. CUTHBERT (Sydney) explained the system whereby the mobile blood transfusion scheme for the reduction of maternal mortality was used in Sydney.

K. G. WORNER (Perth) said that diagnosis of *placenta previa*, other than on the table by vaginal examination, was difficult to make. In text-books it was said to be a disease of multiparous women. He did not think so. Figures quoted showed that the condition occurred in 3.5% of *multiparae* and in 1% of *primiparae*; but there were 3.5% more *multiparae* than *primiparae*. He thought that bimanual compression of the uterus was not greatly used, because it was an emergency measure and might be carried out while one was waiting for the blood transfusion.

H. T. ILLINGWORTH (Wiluna, Western Australia) asked Professor Mayes how to remove the second twin if it was not born spontaneously.

B. T. Mayes (Sydney) said that if the mother's condition was satisfactory he would correct the "lie" and position, rupture the membranes and then apply forceps or deliver the child by the breech.

H. C. CALLAGHER (Perth) stressed the importance of admitting to hospital the patient with a *placenta previa* who was being treated conservatively, with her blood typed and all ready for any emergency.

J. L. TAYLOR (Sydney) said that at the Women's Hospital, Crown Street, they had given 0.5 millilitre of pitocin to 100 patients after delivery of the anterior shoulder. The placenta were delivered in an average time of nine and a half minutes, with an average blood loss of two and a half ounces. One patient needed a manual removal of the placenta, which was no more difficult than ordinarily.



MARY DE GARIS (Geelong) thought that people who had post-partum hæmorrhages were those with a hæmorrhagic diathesis. In cases in which the hæmorrhage persisted and the uterus had contracted, it was a good thing to give a hot vaginal douche. She thought that it was better for a patient with a retained placenta to have it removed at home instead of being taken to hospital.

E. BETTINGHAM-MOORE (Tasmania) considered that if the membranes were to be artificially ruptured, the more widely it was done the better.

W. K. McIntyre (Launceston), in reply, said that he agreed with the comments of the speakers, and went on to show his films. The first illustrated the technique of saline injection of the umbilical cord, and the second the use of a respirator for babies.

H. W. HORN (Brisbane), from the chair, said that he had practised domiciliary midwifery for years and could see no harm in performing manual removal of the placenta in the home.

#### Vaginal Hysterectomy.

B. M. SUTHERLAND (Melbourne) discussed vaginal hysterectomy, which he said was one of the oldest gynaecological operations. Since its introduction, improved technique of abdominal surgery had influenced surgeons in favour of the abdominal approach to pelvic organs; thus vaginal hysterectomy had been relegated to its rational sphere in selected cases. The conditions in which it was suitable were seven in number: (i) procidentia, especially that associated with atrophic uterus or attenuated cardinal ligaments or enterocele; (ii) senile metritis and chronic cervicitis, malignant disease excluded; (iii) *metropathia hæmorrhagica* or *fibrosis uteri*; (iv) a small fibroid tumour, provided the fundus was no larger than three inches in diameter, and polypi; (v) stoutness of the patient—there was a liability to hernia if the abdominal approach was used; (vi) when there was any doubt that the patient would survive the abdominal operation; (vii) in the fourth decade, when in addition to a damaged birth canal there was considerable disease of the uterus; it was advisable for the patient's health to extirpate the uterus. The following considerations were of help in the decision whether or not to perform the operation. (a) There should be some relaxation of the vaginal outlet. (b) There should be no fixity of the uterus due to cicatrization of pelvic fascia, no pelvic adhesions or matting of the uterus to the surrounding viscera, and no pelvic disease; the patient should not have previously undergone such procedures as a Gilliam operation or ventrosuspension. (c) The fundus should be of such a size as to be deliverable through the vesico-uterine space without undue force or manipulation. Dr. Sutherland went on to say that the operation should be undertaken only by those who had a sound knowledge of pelvic pathology and anatomy; they must assess their own dexterity and limitations. Before operation the patient should be rested and investigated; such patients were often in poor health. The blood urea content, sugar tolerance and prothrombin time should be estimated, and the patient should be treated for any abnormalities disclosed. A hæmoglobin value below 60% called for a blood transfusion, and in hæmorrhagic conditions curettage to exclude cancer was necessary. Dr. Sutherland then described the operation in detail, particularly stressing two points. (i) The vagina was difficult to sterilize because of its mixed flora and moist conditions; moreover, in most diseased conditions the cervical glands contained mixed organisms, which under manipulation were apt to reinfest the field. (ii) The pelvic planes when opened were not highly resistant to pathogenic organisms; thus special care in the preparation of the operative field was essential. He said that the main complications of the operation were pelvic cellulitis, peritonitis (either general or pelvic), hæmorrhage, bladder damage and trauma to a ureter. Dr. Sutherland then briefly compared the mortality and morbidity figures for the three types of hysterectomy at the Women's Hospital, Melbourne. Vaginal and total hysterectomy had the highest morbidity rates and vaginal hysterectomy had the highest mortality rate. Dr. Sutherland

urged attention to the preparation of the patient and of the operative field and asked for a review of surgical technique; he pointed out that the morbidity and mortality rates must be lowered if the operation was to reclaim its place, as it had elsewhere. He thought that benefit might accrue from the use of penicillin, the sulphonamide drugs and anticoagulants such as "Dicumarol"; gynaecologists as a whole had not adopted such preventive measures. He drew attention to the advantages of the operation: the absence of shock and abdominal discomfort, the more rapid convalescence and ability to rise from bed, the earlier discharge from hospital and the practical impossibility of hernia. He thought that the following factors militated against the performance of the operation: (i) the improved technique in the abdominal approach, (ii) the introduction of the Manchester operation, (iii) the difficulty of vaginal hysterectomy to a student who had been encouraged to visualize the anatomy of the female organs from above, and (iv) the decreasing number of suitable subjects with the increasing number of surgeons; it was thus more difficult to become proficient. Dr. Sutherland thought that the operation still had its place.

ROBERT FOWLER (Melbourne) said that the subject was important for gynaecologists. It was an operation that had been performed for many years, and more frequently before abdominal surgery entered into its present brilliant phase. He thought it had been neglected of late by British gynaecologists while it was still frequently performed on the Continent. He considered it was an operation which should be performed only by gynaecologists. He did not think it necessary to have either much descent of the uterus or a large vaginal outlet; the latter could be enlarged if required. If the uterus was too large to deliver it could be split and the fibroid tumours enucleated. He said that when performing the Manchester operation he always made an opening into the peritoneum posteriorly, in order to be sure that the supporting stitches went well into the cardinal ligaments, and to make certain that no enterocele was present. When genital prolapse had occurred, it must be repaired at the same time.

R. F. MATTERS (Adelaide) said that if the cervix was sutured before the operation was begun, the suture might be used as a tractor and would also prevent leakage of infected discharge from the cervical canal into the wound. After suturing the cardinal ligaments he liked to use a strong chromicized ligature to bring them together. He thought that the broad and round ligaments should be brought together in the mid-line.

F. A. MAGUIRE (Sydney) said that in his opinion, unless the operation was being performed on a patient with a very lax and open pelvic floor for the removal of an unhealthy uterus as part of an operation for the repair of prolapse (and it should be clear that the removal of a healthy uterus in the repair of prolapse was not necessary), vaginal hysterectomy was a difficult and dangerous procedure full of traps for the unwary. It should be performed only by an operator well skilled in pelvic surgery, who had a thorough knowledge of pelvic anatomy. One of the greatest dangers was slipping of the clamps on the broad ligaments; large vessels might retract out of reach in the depths of the pelvic connective tissue. That was the reason why Dr. Sutherland had emphasized the need for double ties on all pedicles. Otherwise total hysterectomy was to be preferred. In urgent cases the latter operation could be completed in thirty-five minutes, and everything was under the control of the operator. Dr. Maguire emphasized that while vaginal hysterectomy had its place, and should be part of the surgical equipment of every skilled gynaecologist, it was not to be approached lightly, and every case in which it was used should be carefully selected with due regard to the limitations imposed by Dr. Sutherland. Dr. Maguire said that the fact that in a series of 115 cases eight post-operative deaths occurred, and that four of them were due to hæmorrhage, was proof of his contention. If unfortunately serious hæmorrhage occurred after operation, and if the surgeon could determine from which side of the pelvis the blood was flowing, the best way to control it was by ligature of the internal iliac artery on that side by the extraperitoneal route



through a generous incision above and parallel with the inguinal ligament. That gave a quick, easy and bloodless exposure of the internal iliac artery.

S. E. CRAIG (Perth) considered that the operation should be used only in the type of case indicated by Dr. Maguire.

D. QUINLAN (Perth) also considered that there were many traps in which the unwary operator might be caught. He recalled a case in which both fibroid tumours and prolapse were present. After making an opening into the abdominal cavity he had found that endometriosis was also present, so after completing the vaginal repair he had had to continue the operation through an incision in the anterior abdominal wall.

P. C. THOMAS (Perth) said that Dr. Sutherland had mentioned the Spalding Richardson operation, in which the body of the uterus and the top of the cervix were removed and the remainder of the cervix was interposed behind the bladder. He considered that that was not a good operation. He considered that one needed to select carefully the subjects for vaginal hysterectomy.

B. M. SUTHERLAND (Melbourne), in reply, said that he thought there was a definite sphere for the operation. The reconstruction of the pelvic floor was a most important part of it; the round ligaments and the cardinal ligaments should be sutured to one another, and the utero-sacral ligaments in their turn sutured to the round ligaments and to the pubo-cervical ligaments, and the last-mentioned sutured under the base of the bladder.

#### Endometriosis.

D. A. QUINLAN (Perth) read a paper on endometriosis, based on his experience of 76 cases of endometriosis during the preceding four years. He said that endometriosis might be defined as an abnormal growth of the endometrial tissue outside the uterine cavity. The greatest incidence was between the ages of thirty and fifty years. Endometrial deposits were found in the female organs of reproduction and in structures in close proximity. Adenomyosis (*endometriosis interna*) was endometriosis invading the muscle fibres of the uterus. Endometrial implants had the same histological structure as the glands of the uterine mucosa, and were subject to activation by the ovaries with the production of cyclical hæmorrhage. The blood, which accumulated in the peritoneal cavity, set up local inflammatory reactions in the pelvis, caused adhesions to adjacent organs and eventually infiltrated them. If one or both ovaries were involved, the result might be the formation of "chocolate cysts". The condition progressed slowly. The cysts at times ruptured and released their tarry contents, and if the fluid contained active endometrial cells, fresh implants might be produced in other parts. Adhesions in the early stages might be only filmy, but in advanced cases they might develop into the condition known as "frozen pelvis"; surgical treatment was then out of the question. Many theories had been put forward to explain endometriosis, but nothing conclusive was known of the activating force which set the condition in motion. Symptoms might be entirely absent, but on pelvic examination severe pain and discomfort might be elicited by pressure or movement in the region involved with implants. The chief symptoms were dysmenorrhœa, primary or secondary sterility, rectal pain and pain on defæcation, irregular uterine hæmorrhage (which might not be present), and lower abdominal pain. Associated symptoms were back-ache, dyspareunia, pain down the thighs and in the groins and increasing constipation. In the diagnosis, during examination of the pelvis it was important to use a vaginal speculum, to discover the presence of hypertrophy of the cervix and of blue-domed cysts, particularly in the posterior fornix. On bi-manual examination movement of the cervix away from the site of the lesion would generally elicit pain. The palpation of small, hard, tender nodules in the posterior fornix was significant. Attempts to replace the retroverted uterus would cause acute pain if the utero-sacral ligaments and posterior vaginal fornix were involved. Referred pain would be felt in the rectum if the rectal wall was involved. The uterus might be normal in size, or enlarged and irregular if adenomyomata or

fibroid tumours were present. Rectal examination would confirm the presence of tender nodules in the posterior fornix. When the rectum was involved carcinoma of that organ might be simulated; confirmation of the condition might be obtained by a barium enema examination. Sigmoidoscopy caused localized pain, but the mucosa was intact and hæmorrhage was rare in endometriosis. Finally at operation the typical puckering of the serous coat of the bowel with the presence of endometrial implants would confirm the diagnosis. Treatment would depend on (a) the extent of the pelvic involvement, including associated abnormalities, (b) the age of the patient and (c) any associated sterility. The treatment of young women with injections of testosterone propionate might give temporary relief, but might also tend to produce masculinization. Surgical treatment had to be resorted to in the majority of cases, and conservatism should be observed as far as possible. Deep X-ray therapy to inactivate the ovaries should never be used except when the condition was inoperable.

F. A. MAGUIRE (Sydney), in opening the discussion, said that Dr. Quinlan had dealt comprehensively with the subject, particularly with the ætiology and pathology; he himself would refer to the diagnosis and treatment. Correct diagnosis was always essential before one could apply the proper treatment. The classical syndrome had nine main characteristics: (i) pelvic pain beginning four to six days before menstruation; (ii) an increase in the pain during menstruation, which was usually regarded as severe dysmenorrhœa; (iii) as a rule freedom from pain between the menstrual periods; (iv) onset of the symptoms usually in the late thirties; (v) generally an absence of a history of previous pelvic infection (if such a history was obtained, it was difficult to diagnose endometriosis from congestive dysmenorrhœa, and the diagnosis might be made only at operation); (vi) if the endometriosis affected the pouch of Douglas, the presence of local tenderness with increasing dyspareunia; (vii) if the bladder wall was affected, the presence of painful micturition; (viii) if a large tarry cyst ruptured, the occurrence of the picture of acute pelvic peritonitis from the irritation set up by the contents; that was most likely to occur during menstruation, as the pressure in the cyst was then increased. Dr. Maguire went on to say that the pelvic pain of endometriosis had certain characteristics peculiar to it. (i) It was not relieved by antispasmodics, as was congestive dysmenorrhœa. (ii) It was not relieved, but increased, by heat. (iii) Activity of any kind increased the pain—for example, coitus, travelling by motor-car or train, pelvic examination or long hours spent standing. (iv) If endometriosis was extensive, the patient was never comfortable throughout the month. Dr. Maguire then referred to points in diagnosis. He said that a careful, detailed and accurate history should be taken and the points evaluated. Examination, especially *per rectum*, might reveal puckered, hard, indurated nodules in the pouch of Douglas or on the back of the uterus. Examination of the patient in three positions—dorsal position, then legs straight, then dorsal position with the "tail" lifted—often revealed diminished mobility of the uterus and increased sensitivity of the utero-sacral ligaments. Particular note should be taken of any fixation of tubo-ovarian masses, as there were only three conditions that caused fixation of pelvic masses: (a) inflammation, (b) malignant disease and (c) endometriosis. The history and other physical signs should make it possible to decide which of the conditions was present. Dr. Maguire then discussed the treatment of endometriosis. He urged gynaecologists above all to avoid "playing around" with endocrine preparations. He said that he had seen much harm done in gynaecology by their indiscriminate and unintelligent use. They were often prescribed if bleeding occurred, or did not occur, or was excessive or irregular, or before or after the menopause, without regard to the history or physical examination, and without regard to present-day knowledge of what endocrines might or might not do. Caution was very necessary with androgens; no woman would thank the gynaecologist who relieved her pain and at the same time presented her with a beard. The presence of endometriosis made any pelvic operation more difficult. It should be remembered that each spot

of endometriosis, as Counsellor and Sluder had pointed out, was "a little uterus". Castration by complete removal of both ovaries effected a cure in the majority of cases, and as the greater number of patients were aged over forty years, that was the treatment of choice. But if the symptoms were due to mechanical causes, such as a mass in the pelvis, an obstructed loop of bowel or massive adhesions, laparotomy was needed. Castration might be surgical or effected by radium or X rays; but radium or X rays should never be used to stop hæmorrhage unless a diagnostic curettage was first carried out to exclude any malignant condition—otherwise there might be a disaster. The sterilizing dose of radiation which would stop ovarian function would only stimulate malignant tissue to grow faster, or mask the malignant condition until it was too late to do anything useful. But in the treatment of women aged under forty years an effort should be made to save at least a portion of one ovary. In the case of women who were sterile, it might be possible to remove an adenomyoma from the uterus or an accompanying fibroid tumour, and to ablate the affected Fallopian tube and ovary or part of both ovaries, and still give the patient a chance of pregnancy, even if at a later date she required further operation. But it was the bounden duty of gynaecologists to give the patient that chance of pregnancy. Every case must be judged on its merits, and called for much skill and judgement. If in a woman aged over forty years the condition was extensive, it was better to remove both Fallopian tubes and ovaries and the uterus. But if the uterus was fixed, it was safer to perform a supravaginal than a total hysterectomy. The operation was often made more difficult by a number of complicating factors. (i) Dense fibrous adhesions might bind the ovary to the broad ligament. (ii) Dense adhesions might be present between the uterus, Fallopian tubes, ovaries and bowel. (iii) Endometriosis grew, not only onto, but into, the tissues, simulating malignant infiltration. (iv) As a result there were often no planes of cleavage, such as were found in old inflammatory conditions, in which one might with patience strip an old infected tube up out of the pelvis. (v) As a further result of (iii), it was easy to tear through the peritoneum and even to open the bowel. (vi) The only way to separate adhesions in endometriosis was to cut them with a sharp edge. Thus the surgeon needed wide exposure, good light, good anaesthesia with comfortable relaxation, a sound knowledge of pelvic anatomy and a good cutting edge. He should not split or tear adhesions. He should see what he cut. He should keep well away from bowel, if necessary detaching small pieces of other tissue and leaving it on the bowel. Loops of adherent bowel and bands should be freed. Great care was necessary if the bladder was adherent in front, as it might easily be torn or perforated. The ureter was in great danger in those operations, for three reasons. (a) The field might be obscured by tarry fluid, by oozing or by pads in the hands of the assistant, and the surgeon might lose track of the ureter and cut it accidentally. (b) The ureter might be closely bound to the caecum by local infiltration. (c) The pelvic connective tissue might be dense and the ureter might be lifted up when the uterus was elevated for clamping of the uterine cavity. If the surgeon was in doubt, he should deliberately dissect the ureter out as in a Wertheim operation. Dr. Maguire said that such operations might test the skill of the most experienced operator, if the condition was advanced. Indeed, if the pelvis was too extensively infiltrated by endometriosis, it might even be better to close the abdomen and obtain radiological sterilization by deep X rays.

H. C. CALLAGHER (Perth) said that he considered that the session had ended on the high and happy note on which it had begun. He had been interested to hear that Dr. Maguire and Dr. Quinlan both considered that the condition was becoming more frequent; that was his opinion also. The more often it was seen, the easier it was to diagnose. He thought that conservatism was very difficult, but necessary, and if one was too conservative further trouble arose. He recalled a remark of Dr. Charles Mayo, who had said that if one was to do anything to an ovary, one should "lop it off".

W. K. McINTYRE (Launceston) said that he deplored the indiscriminate use of oestrogens. He had found in some cases that when he had prescribed a small quantity of stilbæstrol, as, for example, for patients suffering from menopausal symptoms, the pharmacist had repeated it a number of times. He quoted one case in which a patient had returned after having uterine hæmorrhage for six months, having taken stilbæstrol for the previous eighteen months. He thought that as a body they might do something to guard against that kind of occurrence.

K. G. ABERDEEN (Perth) congratulated Dr. Maguire on his comments. He said that he had found, when dealing with raw areas in the abdomen, that number 60 cotton on a very fine needle was useful; but one had to remember when preparing it that cotton contracted 10% on being boiled. He had found that cellulose cotton was useful in cases of persistent oozing.

P. C. THOMAS (Perth) said that if the theory of Sampson of the cause of endometriosis was accepted, it was curious that when the Manchester operation was being performed and healthy endometrium was spilled into the wound, no endometriosis occurred in the vagina. He asked the speaker's view as to whether he thought drainage of the abdomen was necessary after such operations. Dr. Thomas also asked whether the previous speakers had known pregnancy to occur after conservative operations, and whether they had had to operate again.

R. FOWLER (Melbourne) said that the question of radical *versus* conservative treatment was a big one. He had had experience in both, and felt that it was criminal to perform a total ablation of organs on a young person. He recalled one rather remarkable case of a woman, aged over thirty years, who had been married for nine years and had no family; she presented a picture of classical but not gross endometriosis. He had performed a partial resection of one ovary and Fallopian tube. He gave the prognosis that he considered pregnancy was unlikely to occur, and that the condition might recur in four years' time; however, she conceived a short time later and was delivered of a living child.

B. T. MAYES (Sydney) said that he was interested in Dr. Fowler's story. Gynaecological operations often had a bearing on pregnancy and labour as was seen in the case of myomectomy, in which a possible weakening of the uterine wall might follow operation. He would like to see conservatism used whenever possible. He felt sure that obstetricians could be assured that gynaecological treatment would be of a conservative nature.

D. QUINLAN (Perth), in reply, said that he had only had to reopen the abdomen of one patient. He agreed with Dr. McIntyre in his remarks about the use of oestrogens. In reply to Dr. Thomas, he said that he had never seen endometriosis in the vagina; but one of his colleagues had seen it in an episiotomy scar. He did not consider it necessary to drain the abdomen. With regard to pregnancy occurring with endometriosis, it would seem that that condition was dormant when the pregnancy was present. He could quote one case in which he had partially resected both ovaries in April, 1947; that patient was now three months pregnant. Another patient who had been left with one-quarter of one ovary was also pregnant. He thought that conservatism should always be adopted.

B. T. Mayes (Sydney) said that, before closing the session, he would be glad to know if any member had any suggestions to bring forward. The Royal College of Obstetricians and Gynaecologists now had a representative on the National Health and Medical Research Council, who provided a direct channel along which suggestions might go to that important body.

W. K. McIntyre (Launceston) said that he wished to propose that at a future meeting a longer time should be given for the papers and for the invited speaker. He suggested that it should be thirty minutes for the paper and ten for the speaker. The motion was seconded by F. A. Maguire (Sydney) and carried.

W. T. GREENING (Ballarat) moved that copies of the paper to be read might be distributed among the members

a few days before the session; they could then be taken as read and a discussion could be opened by the speaker. The motion was seconded by W. K. McIntyre and carried.

B. M. SUTHERLAND (Melbourne) moved that one-half day be allotted to one subject.

H. C. Callagher (Perth) supported the motion, but thought that it might be incorporated in the original motion of Dr. McIntyre if acceptable. The proposer and seconder of the previous motion agreed to the suggestion.

B. T. Mayes (Sydney), in conclusion, said that he felt that in future his attention would be drawn with interest to publications from the speakers at the congress. The members would go away with some ideas concerted and with some on which they differed. He thought that eclampsia should in time with correct ante-natal care disappear from the text-books. The question of the return to domiciliary midwifery should be kept in mind. They had all been warned of the dangers that might arise from the operation of myomectomy. If no new ideas had been learnt from the study of delayed labour, the risks attached to it had been fully discussed and ideas compared. The description of the treatment of post-partum hæmorrhage was a definite contribution, with a possible revival of the injection of saline solution into the umbilical cord. He thought that that day's session had been excellent, and that all would receive benefit from it.

(To be continued.)

## British Medical Association News.

### NEW SOUTH WALES BRANCH NEWS.

A MEETING of the Pædiatric Section of the New South Wales Branch will be held in the Robert H. Todd Assembly Hall at 8.30 p.m. on Friday, October 15, 1948. Dr. T. Y. Nelson will present a paper on "Intussusception with Special Reference to Hydrostatic Pressure". There will also be a paper or case report on a medical subject. A free discussion is invited and there will be supper available at the conclusion of the meeting.

## Post-Graduate Work.

### THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

#### Series of Surgical Demonstrations in Pathology.

A SERIES of approximately eight surgical demonstrations in pathology will shortly be conducted by Dr. V. J. McGovern, Post-Graduate Lecturer in Pathology, in the Pathology Department of the New Medical School. The course will be a limited one and those interested are requested to notify the Course Secretary of the Committee as soon as possible.

#### Course of Lectures in the Principles of Surgery.

The Post-Graduate Committee in Medicine in the University of Sydney announces that a series of eight lectures suitable for all candidates for the F.R.A.C.S. Part II Diploma in general and special branches of surgery has been arranged in conjunction with the New South Wales State Committee of the Royal Australasian College of Surgeons. Lectures will take place on eight consecutive Thursdays at 5.15 p.m., beginning Thursday, October 7, 1948, the programme being as follows: October 7: "Tissue Death", Dr. Douglas Miller; October 14: "Important Surgical Infections", Dr. Douglas Miller; October 21: "Fluid Balance, Nitrogen, Acid/Base Balance", Dr. F. H. Mills; October 28: "Hæmorrhage, Shock, Transfusion *et cetera*", Dr. F. H. Mills; November 4: "Chemotherapy", Dr. N. R. Wyndham; November 11: "The Treatment of Malignancy", Dr. N. R. Wyndham; November 18: "Wounds: Their Healing, Suture and Tissue Replacement", Dr. K. W. Starr; November 25: "Basic Principles in the Management of Deformity", Dr. K. W. Starr.

The course is open to all medical practitioners, the fee being £4 4s. No fee will be charged to those candidates

attending the current course in general surgery for the F.R.A.C.S. Part II examination. Those wishing to enrol are requested to communicate with the Course Secretary, the Post-Graduate Committee in Medicine, 131, Macquarie Street, Sydney, enclosing remittance of fee. Telephones: BW 7483-B 6980.

#### Seminar in Medical Statistics.

On Wednesday, October 13, 1948, Miss Helen Newton Turner will conduct the second of a series of seminars on measurements of association between two variables entitled "Relationships Which are Not Necessarily Straight Line". The seminar will be held in the Main Lecture Theatre, Sydney Hospital, Macquarie Street, Sydney, at 5.45 p.m., and those interested will be welcome.

#### Week-End Course at Parramatta.

THE Post-Graduate Committee in Medicine in the University of Sydney in conjunction with the Central Western Medical Association will hold a week-end course at the Parramatta District Hospital, Parramatta, on Saturday, October 16, and Sunday, October 17, 1948. The programme is as follows:

Saturday, October 16, 1948: 2 p.m., Registration; 2.30 p.m., "Surgery in Relation to Vascular Diseases", Dr. F. H. Mills; 4 p.m., "Hypertension and Sympathectomy", Dr. A. W. Morrow.

Sunday, October 17, 1948: 10 a.m., "Progress in Pædiatrics", Dr. Lorimer Dods; 11.30 a.m., "Recent Advances in Abdominal Surgery", Dr. F. H. Mills; 2 p.m., "Streptomycin Therapy", Dr. A. W. Morrow; 3 p.m., "The Acute Diarrhoeas of Infancy", Dr. Lorimer Dods.

The fee for the course will be £2 2s. Those wishing to attend are requested to notify Dr. K. S. Macarthur Brown, Honorary Secretary, Central Western Medical Association, George Street, Parramatta, as soon as possible.

#### Week-End Course at Orange.

The Post-Graduate Committee in Medicine in the University of Sydney in conjunction with the Western Medical Association will hold a week-end course at the Hotel Canobolas, Orange, on Saturday and Sunday, November 6 and 7, 1948. The programme is as follows:

Saturday, November 6, 1948: 2 p.m., Registration; 2.30 p.m., "Control of Clotting and Thrombosis in Surgery", Dr. S. Livingstone Spencer; 4 p.m., "Management of Rheumatic Heart Disease", Dr. John H. Halliday.

Sunday, November 7, 1948: 10 a.m., "Toxæmias of Pregnancy", Professor Bruce T. Mayes; 11.30 a.m., "Surgery of Hernia", Dr. S. Livingstone Spencer; 2 p.m., "Electrocardiography in Relation to Cardiac Pain", Dr. John H. Halliday; 3 p.m., "Breech Delivery", Professor Bruce T. Mayes.

The fee for the course will be £2 2s. Those wishing to attend are requested to notify Dr. S. R. Dawes, Honorary Secretary, Western Medical Association, Box 240, Orange, as soon as possible.

### NUFFIELD FOUNDATION DOMINION TRAVELLING FELLOWSHIPS.

THE trustees of the Nuffield Foundation have announced that they will offer to Australian graduates various travelling fellowships to begin in 1949. Three of these will be in medicine, the others being in the natural sciences (2), the humanities (1) and the social sciences (1).

The purpose of the fellowships is to enable men or women who are Australian graduates of outstanding ability to gain experience and training in the United Kingdom in their chosen fields, and to make contact there with scholars working in those fields, with a view to the Fellows' equipping themselves to take up senior posts in research and teaching in Australia. A Fellow will be expected to resume residence in Australia on the completion of the Fellowship.

The awards are available to Australian nationals, normally between the ages of twenty-five and thirty-five years, preferably holding a master's or doctor's degree with a year or more of subsequent teaching or research experience on the staff of a university or comparable institution.

The fellowships will normally be tenable for one year, and will be of the value of between £600 and £800 (sterling) *per annum* (exclusive of travelling expenses), according to individual circumstances.



Applications for 1949 fellowships should be submitted not later than November 15, 1948, to the Secretary, Nuffield Foundation Australian Advisory Committee, c.o. University of Melbourne, Carlton, N.3. Victoria, from whom copies of the application form may be obtained.

#### THE MELBOURNE PERMANENT POST-GRADUATE COMMITTEE.

##### Week-End Course at Mooroopna.

The Melbourne Permanent Post-Graduate Committee announces the following details of a week-end course to be held at Mooroopna:

October 23: 2.30 p.m., Dr. Stanley Williams, "Chemotherapy in Acute Infections of Children"; 8 p.m., Dr. R. M. Rome, "Obstetric Haemorrhage".

October 24: 10 a.m., Dr. S. F. Reid, "Common Vascular Disorders of the Extremities"; 2 p.m., Dr. W. Lempriere, "Dermatological Digest".

The fee for this course is £2 2s. Enrolments should be made with Dr. B. R. Schloeffel, 98, Maude Street, Shepparton. Telephone 67.

### Correspondence.

#### THE PHARMACEUTICAL BENEFITS ACT.

SIR: The reports of pressure by the Housing Commission on doctors at Hargrave Park to force them to dispense under the government free medicine scheme indicate to me only the beginnings of a type of victimization which may be expected from governments against doctors who persist in doing what they think best for their patients. Now it is going to be a question of "Too bad about Dr. So-and-so losing his practice or his hospital appointment, or being fined so heavily" *et cetera*, or on the other hand, of immediately organizing for some form of strike to have ready when needed.

The British Medical Association here and in England have announced proudly enough that the doctors will never strike. Well, I wish to request with equal pride the honour of constituting a minority of one.

Yours, etc.,

143, Macquarie Street,  
Sydney,  
September 6, 1948.

C. C. McKellar.

### Public Health.

#### AUSTRALIAN TUBERCULOSIS ASSOCIATION.

ON August 26, 1948, in the Senate Chamber of the University of Perth a public meeting was held at which the first steps were taken to form an Australian Tuberculosis Association. Professor E. J. Underwood, the President of the Tuberculosis Association of Western Australia, presided. He welcomed a representative gathering of medical and lay people, and outlined the objectives of the proposed Association. A motion moved by Dr. D. R. W. Cowan, of Adelaide, and seconded by Dr. W. B. Cotter Harvey, of Sydney, was carried unanimously. The terms of the resolution were:

Recognizing the gravity of tuberculosis as a medical and social problem, and being aware of the important part played in its control by voluntary associations in other countries, the persons present at this meeting agree to form an Australian Tuberculosis Association.

A provisional committee was then appointed to draw up a constitution and a programme for submission to a subsequent meeting. Officers elected were: President, Sir Henry Newland; Honorary Secretary, Dr. D. R. W. Cowan; Committee Members, Dr. W. B. Cotter Harvey, Dr. Grace Cuthbert and Mrs. John Moore, O.B.E., from New South Wales; Professor P. MacCallum, Sir Sidney Sewell, Dr. D. Galbraith and Mr. A. S. H. Gifford from Victoria; Dr. H. W. Wunderly representing the Australian Capital Territory; Dr. J. L. Hayward and Mrs. Lance Lewis, O.B.E., from South Australia; Professor E. J. Underwood, Dr. L. Henzell and

Mr. A. J. Bishop from Western Australia; Dr. Ellis Murphy from Queensland; and Dr. J. L. Grove from Tasmania.

The aim of the Association will be to assist in every way possible towards the eradication of tuberculosis by enlisting the cooperation of the people with the medical profession in disseminating knowledge concerning the causes, treatment and prevention of the disease. It will engage in propaganda designed to secure increased efforts to combat tuberculosis and in education by means of leaflets, films, radio and newspaper and other publicity.

A meeting of the provisional committee has been held and it has been decided as a matter of policy that there shall be a national body with divisions in each State, the latter to have the fullest measure of autonomy consistent with the aims and objects of the parent body. Work in preparing a constitution and drawing up a programme will be started immediately.

### Medical Prizes.

#### THE NEW SOUTH WALES MEDICAL WOMEN'S SOCIETY PRIZE.

THE Medical Women's Society of New South Wales is awarding an annual prize of 25 guineas for the period of five years.

1. The prize shall be of 25 guineas and shall be open for competition in the year 1948 and for four consecutive years thereafter.

2. The prize shall be open to members of the Medical Women's Society of New South Wales.

3. The prize shall be awarded for an original contribution on a subject of medical interest, published or ready for publication during that year.

4. In the event of a contribution by one or more members in collaboration the prize shall be divided equally between the contributors.

5. The Medical Women's Society of New South Wales shall appoint examiners and the award will be made on their recommendation in the month of February of each year.

6. The closing date for entries shall be November 30 of each year.

7. The prize shall not be awarded if either the examiners or the committee of the Society consider that the standard of the work or works is not sufficiently high to justify the award of the prize.

### Naval, Military and Air Force.

#### MEDICAL HISTORY OF THE WAR OF 1939-1945.

A MEETING of the members of the British and Dominions Liaison Committee of Medical War Historians was held in Oxford, England, on August 3 to 7, 1948. This body was formed in 1946 at the instance of the British Official Medical War History's organization, and the first meeting was held in that year in London. In 1947 a most successful meeting was held at Ottawa, at which representatives of the British and Dominions Medical War Histories were present, and also, by invitation, the editors of the American Army and Naval Medical Histories and the Chief American Army Historian. The meeting at Oxford was attended by representatives of the Medical War Histories of Great Britain, Australia, Canada, India and Pakistan, New Zealand, South Africa and the United States of America. All aspects of the medical histories were thoroughly discussed, and drafts of both clinical and operational accounts were produced for exchange and discussion. All material is freely made available between the historians through the central secretariat of the Liaison Committee in London. The editors of these histories have agreed that efforts should be made to publish the clinical accounts first, and at an early date, and it is hoped that most of the clinical drafts will be ready within a year.

#### APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 131, of September 2, 1948.

### AUSTRALIAN MILITARY FORCES. Interim Army.

#### Australian Army Medical Corps (Medical).

130th Australian General Hospital: To be Temporary Major, 19th May, 1948.—VX504193 Captain F. Grunseit.  
20th Field Ambulance: To be Temporary Major, 7th June, 1948.—WX501273 Captain C. G. Batten.

### Active Citizen Military Forces.

Southern Command: Fourth Military District: Third Division.

3rd Field Ambulance.—4/31901 Lieutenant-Colonel R. G. Champion de Crespigny is appointed from the Reserve of Officers, 1st April, 1948, and is appointed to command, 9th July, 1948.

4/31912 Lieutenant-Colonel E. P. Cherry relinquishes command and is transferred to the Reserve of Officers, Australian Army Medical Corps (4th Military District), 9th July, 1948.

### ROYAL AUSTRALIAN AIR FORCE. Citizen Air Force.

#### Medical Branch.

Peter Charles Tresise (297501), M.B., B.S., D.P.M.R.C.P. and S. (England), is appointed to a commission with the temporary rank of Squadron Leader, 21st May, 1948, for part-time duties as a psychiatrist.

## Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Melick, Roger Aziz, M.B., B.S., 1947 (Univ. Sydney), 43, Prince Street, Randwick.  
Booth, Howard Keith, M.B., B.S., 1946 (Univ. Sydney), 354, Chapel Road, Bankstown.

The undermentioned have applied for election as members of the South Australian Branch of the British Medical Association:

Peters, Brian Harry, M.B., B.S., 1948 (Univ. Adelaide), 726, Seaview Road, Grange, South Australia.  
De Bruin, Arthur James, M.B., B.S., 1945 (Univ. Ceylon), Institute of Medical and Veterinary Science, Adelaide.  
Zimmet, Jacob, M.B., B.S., 1942 (Univ. Adelaide), Whyalla, South Australia.

The undermentioned have been elected members of the South Australian Branch of the British Medical Association:

Reid, Ross Trevor Wishart, M.B., B.S., 1947 (Univ. Adelaide), Royal Adelaide Hospital, Adelaide.  
Goode, Benjamin Ryall, M.B., B.S., 1947 (Univ. Adelaide), Frome House, North Terrace, Adelaide.  
Milton, Gerald White, M.B., B.S., 1947 (Univ. Adelaide), Royal Adelaide Hospital, Adelaide.

## Obituary.

### ROBERT BEITH.

WE regret to announce the death of Dr. Robert Beith, which occurred on September 15, 1948, at Killara, New South Wales.

### CHARLES JAMES ALSOP.

WE regret to announce the death of Dr. Charles James Alsop, which occurred on September 19, 1948, at Melbourne.

## Medical Appointments.

Dr. P. O. Flecker has been appointed government medical officer at Mareeba, Queensland.

## Diary for the Month.

- OCT. 5.—New South Wales Branch, B.M.A.: Council Quarterly.
- OCT. 6.—Victorian Branch, B.M.A.: Branch Meeting.
- OCT. 6.—Western Australian Branch, B.M.A.: Council Meeting.
- OCT. 7.—South Australian Branch, B.M.A.: Council Meeting.
- OCT. 8.—Queensland Branch, B.M.A.: Council Meeting.
- OCT. 12.—New South Wales Branch, B.M.A.: Executive and Finance Committee, Organization and Science Committee.
- OCT. 14.—Victorian Branch, B.M.A.: Organization Subcommittee.
- OCT. 18.—Victorian Branch, B.M.A.: Finance, House and Library Subcommittee.
- OCT. 19.—New South Wales Branch, B.M.A.: Medical Politics Committee.
- OCT. 20.—Western Australian Branch, B.M.A.: General Meeting.
- OCT. 21.—New South Wales Branch, B.M.A.: Clinical Meeting.
- OCT. 21.—Victorian Branch, B.M.A.: Executive Meeting.
- OCT. 22.—Queensland Branch, B.M.A.: Council Meeting.
- OCT. 26.—New South Wales Branch, B.M.A.: Ethics Committee.

## Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

New South Wales Branch (Honorary Secretary, 135, Macquarie Street, Sydney): Australian Natives' Association; Ashfield and District United Friendly Societies' Dispensary; Balmmain United Friendly Societies' Dispensary; Leichhardt and Petersham United Friendly Societies' Dispensary; Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney; North Sydney Friendly Societies' Dispensary Limited; People's Prudential Assurance Company Limited; Phoenix Mutual Provident Society.

Victorian Branch (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federal Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

Queensland Branch (Honorary Secretary, B.M.A. House, 225, Wickham Terrace, Brisbane, B.17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute; Brisbane City Council (Medical Officer of Health). Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

South Australian Branch (Honorary Secretary, 178, North Terrace, Adelaide): All Lodge appointments in South Australia; all Contract Practice appointments in South Australia.

Western Australian Branch (Honorary Secretary, 205, Saint George's Terrace, Perth): Wiluna Hospital; all Contract Practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

## Editorial Notices.

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All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

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